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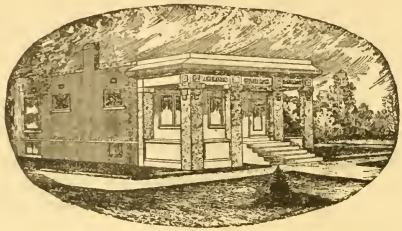

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The Charlotte Medical Journal

VOL. LXVII CHARLOTTE, N. C., JANUARY, 1913. No. 1.

Varieties and Pathology of Goitre.*

By Addison G. Brenizer, A.B., M.D., Surgeon Charlotte Sanatorium and Presbyterian Hospital; Prof. Surgical Pathology and Operative Surgery on the Cadaver in the North Carolina Medical College, Charlotte, N. C.

Under the pathology of the thyroid gland, the following sub heads are separated for study:

I. Traumatic Lesions.
II. Infections and Parasitic Lesions.
  a. Thyroiditis { a. Acute. b. Chronic.
  b. Tuberculosis { a. Miliary. b. Solit'y Tub'cle
  c. Syphilis.
  d. Actinomycosis.
  e. Hydatid Cysts.
III. Diseases resulting from a disturbance in function of the thyroid gland and the parathyroid glandules.
  a. Hypothyroidism (Myxoedema).
  b. Hyperthyroidism (Exophthalmic Goitre, Graves' Disease, Basedow's Disease).
  c. Tetanie.
IV. Tumors { a. Benign. b. Malignant.
V. Goitres.

The word goiter or "goitre" is a French word meaning simply gutter or throat. One designates under the name goitre the benign epithelial tumors of the thyroid gland. (But a goitre is not the only benign tumor of the thyroid gland; there exist benign connective tissue tumors of the thyroid, as a pure fibroma encapsulated in the substance of the thyroid gland; this tumor, however, has been observed only twice (Wolfer, Delor This special variety of tumor must be distinguished from a fibrous goitre, which always includes an epithelial element and from a chronic thyroiditis with a destruction of the parenchyma and formation of abundant scar tissue). The goitres hold, by far, the first place in frequency and importance in the pathology of the thyroid gland. Not only is goitre the most frequently observed of the affections of the thyroid gland, but beyond this, the other lesions (traumata, inflammations and cancer) superimpose themselves more frequently upon a goitre than upon the normal thyroid gland.

Pathological Anatomy.—One should study successively the macroscopic anatomy and the histologic structure of the goitre itself and then the lesions which its presence determines in the neighboring organ structures.

I. *Macroscopic Study.*—In the majority of cases, the goitre occupies frankly the thyroid region and is developed in the gland itself; more rarely it occupies an abnormal site, in the cervical region, more or less removed from the principal gland, which appears sound.

Goitres of the thyroid itself. Hypertrophy of the thyroid, which eonstitutes the goitre, may be total or only partial. A total hypertrophy is rare; here the body of the thyroid appears regularly augmented in volume, without acquiring very considerable dimensions; the normal form is conserved and the surface is smooth. More usually the hypertrophy is partial and is localized in one lobe, the right more often than the left or exceptionally in the isthmus; the hypertrophied portion may be enormous, irregular in shape and thrown into bosses; the rest of the gland is sound.

Whether a single lobe or the totality of the gland is invaded, the goitre may present on macroscopic section two absolutely different aspects, which are lo be distinguished.

In the one instance, the goitre is diffuse and the section presents a uniform appearance, the pathological tissue completely substitutes the normal tissue of which there is not a trace left. This is the parenchymatous hypertrophy—Wolfer, the follicular goitre of Virchow. "The new thyroid tissue forms a mass as evenly distributed and continuous as the parenchyma of the kidney or the liver." (Poncet).

This variety is observed especially in younger people. The appearance of the goitrous tissue is variable in different specimens; it has either the appearance of a repetition of the normal thyroid structure (the adenoid hypertrophy of Wolfer) or it is made up of numerous spaces, of variable dimensions enclosing a sort of yellowish jelly, resembling glue (colloid hypertrophy).

In another instance, on the contrary, the goitre presents as circumscribed areas, ordinarily multiple. Between these areas is found normal thyroid tissue or it may be pushed away and atrophied and reduced to the formation of a fibrous capsule surrounding the goitrous areas and there exists, evident to the eye, a separation from the sur-

*Read before the Mecklenburg County Medical Society.

APR 2 1914

rounding tissue. This is a lucky circumstance for an operative procedure, since these nodules can be enucleated.

The relative frequence of the two large anatomical varieties, the diffuse and nodular goitre, is difficult to appreciate. Authors like Kocher consider enucleatable goitres rare, nevertheless a number of enucleations have been practiced by Sòcin, Poncet and Reveredin and they would claim that circumscribed goitres are more frequent than the diffuse parenchymatous type.

The appearance of the nodules in a circumscribed goitre is very variable; some are solid and others have the character of a colloidal goitre, still others are cystic and contain a light fluid. The solid nodules are made up of a yellowish tissue, which is rather firm and highly vascular (the thyroid adenoma of Wolfer) or by fibrous tissue, whitish in color, dry, hard and cries under the knife.

Cysts of the thyroid, either single or multiple, are one of the most frequent varieties. They result from an extreme dilatation of the vesicles of a colloidal goitre, either diffuse or circumscribed. But other cysts have as their originating cause an interstitial hemorrhage and consequently from an anatomical viewpoint are called false cysts; the dimensions of these cysts are variable and they may become enormous. The contents may be a yellow serous fluid or coagulated blood. Their walls, (the capsule) thick and rigid when they are old, are interiorly smooth and vegetating and embrace abundant and friable blood vessels.

The interior surface of the true cysts is covered with epithelium derived from the goitrous follicle, while there is no epithelial lining in those cysts of hemorrhagic origin.

En resume, let us bear in mind the principal anatomical types of goitre, which are five in number:

1. The Diffuse Parenchymatous Goitre. This has the appearance of normal thyroid tissue and is always diffuse.

2. The Colloidal Goitre. Where the follicles of the thyroid are distended and filled with a yellowish glue-like substance. This type may be either diffuse or circumscribed.

3. The Adenoma (Wolfer).

4. The Nodular Fibrous Goitre.

5. The Cystic Goitre.

These last three are always circumscribed

Secondary alterations may modify the aspect of these principal varieties. Calcification is not rare, particularly in the walls of old cysts and fibrous goitres. Sehrt found areas of calcification in half of the cases operated on in Kraske's Clinic; much more rarely veritable ossification takes place. (Eiselsberg, Sehrt).

A goitre which has been diffuse and occasionally a circumscribed goitre may be accompanied by a tremendous development of blood vessels which give it a very special physiognomy; this type is called a vascular goitre which is sometimes divided in grouping, without much advantage, into the aneurysmic and varicose goitre according as the arteries or the veins predominate respectively. This abnormal vascularity takes place not only in the extra-glandular vessels but also in the intra-glandular vessels and these vessels may proliferate to such an extent as to push aside the goitrous tissue and form a veritable cavernous angioma. (von Eiselsberg).

The goitres in an abnormal situation differ from the preceding types only in location. Their structure is the same, and the same varieties are represented.

1. Thyroptosis (Kocher) or "le goitre plongeant" is seen in old people and cases of emphysema. This is a goitre of the thyroid body which through the continuous efforts of inspiration is drawn down and engaged in the superior thoracic opening.

2. The Endothoracic Goitre It may be located in the middle line behind the sternum (Retrosternal goitre) or lateral behind the clavicle (Retroclavicular goitre). This variety of goitre is very important and grave. It is relatively frequent since it represents, according to Wolfer, Kocher and Wahrmann 8 per cent. to 10 per cent. of all goitres. This endothoracic goitre, with rare exceptions, takes the normal gland as its point of departure, which one finds in front of the trachea and which remains sound or may be slightly hypertrophied. The endothoracic goitre rises in two-thirds of the cases from a lateral lobe and passes behind the vessels of the mediastinum; in one-third of the cases it springs from the isthmus and passes down in front of the trachea and vessels. (Wahrmann).

3. Aberrant Goitres. These, different from the others enumerated, develop outside the normal thyroid gland at the site of the accessory glands; they are called true aberrant goitres when they are isolated completely from the principal gland, and false aberrant goitres when they remain attached by a fibrovascular pedicle. The site of development of these aberrant goitres is very variable. They are most frequently situated in the mediastinum and constitute here a special variety of the endothoracic goitre. They may be situated just under the skin over the upper thorax. They may spring up behind the trachea or oesophagus. They appear above the isthmus of the thyroid gland, all along the remains of the thyro-glossal duct up to the base of the tongue. There exists, besides, aberrant

goitres within the larynx and trachea, which may be seen and mistaken for other growths by the laryngologist.

Microscopic and histogenic study of these varieties of goitre. Whatever the naked eye picture of these goitres, they are all epithelial tumors and their origin is from a proliferation of the glandular epithelium; even the fibrous goitre is never a purely connective tissue tumor.

Histologists are not of one accord regarding the histogenesis of goitre and the discussion rests open between the two contradictory theories of Virchow and Wolfer.

Virchow, whose ideas have been recently taken up by Hitzig, claims that the goitre is a proliferation of the adult thyroid epithelium. The primitive form, that through which the tumor always passes in its beginning, is the follicular goitre, whose structure is that of the normal thyroid gland and is consequently a veritable hypertrophy. All the other forms are derived from this type. When the colloidal material is secreted abundantly, it accumulates in the vesicles, distends them and pushes the epithelium to the periphery and flattens it out there—this is the colloidal type of goitre; and from this type through extreme dilation and fusion a cyst may result. (I have already mentioned the other type of cyst caused by an interstitial hemorrhage into a goitrous nodule). Again, the connective tissue stroma of the gland proliferates around the newly formed vesicles and surrounds them with a thick layer which encroaches upon the follicle and obliterates it—this is the fibrous goitre. The vessels may undergo an abnormal development and give rise to a great vascularity—the vascuiar goitre.

Wolfer, on the contrary, makes a complete distinction between the diffuse goitre and the nodular goitre. The diffuse goitre, he claims, is a simple hypertrophy resulting from a multiplication of the thyroid vesicles; it is according to the more or less abundant secretion and vessels, an adenoid (structure of the normal gland) colloid or vascular.

As to the nodular goitre, he believes it does not take its origin from the adult glandular epithelium, as stated by Virchow, but from collections of embryonic epithelium, which are the remains of aborted thyroid follicles, not utilized in the course of development. These collections of cells which Wolfer has found disseminated in the normal gland, especially at its periphery, have the structure of the thyroid in the fœtus; plain cords of epithelial cells; in proliferating they give rise to a goitre, which is then an adenoma. These collections of epithelial cells conserve the fœtal type and are cellular cords, not vesicles, and secrete no colloidal substance—it is a fœtal adenoma; or these cords of cells may evolve toward the adult glandular type and the cells become grouped into the lining of the vesicles containing colloid; this is a gelatinous adenoma, corresponding to the colloidal goitre of Virchow. The fibrous and cystic goitres result from a transformation of the adenoma.

However, we are dealing here only with the typical proliferation ending with a production of benign tumors and following the plan of development of the normal thyroid. The embryonic epithelial collections described by Wolfer, which certainly exist, may be the point of departure of malignant tumors. (The malignant adenoma and the adeno-carcinoma often little different histologically from the benign adenoma, but characterized by their tendency to invade the vessels and give rise to metastases). Whatever the structure, the fact that a tumor gives rise to metastases suffices to prove the malignancy of a neoplasm and all such goitres should be grouped under the head of carcinomata.

It would seem that there were two types of fœtal adenomata, one capable of developing into a goitre of the colloid, fibrous or cystic type, and the other retaining its fœtal structure only to change abruptly into an adeno-carcinoma. The evolution of aborted cells or even normal cells into cancerous cells is one of degree. "Continuous growth or an accelerated growth is normal; that which does characterize malignant tissue is a combination of these two factors; a continuous accelerated growth which never occurs in normal tissue." (The Nature of Malignant Tumors.—Addison G. Brenizer).

Chemical Constitution of Goitres.—Since Bauman established the presence of iodine in the secretion of the normal thyroid follicles and noted the physioiogical importance of this substance, attention has been drawn to the chemistry of goitres. Bauman and Kocher proved the feeble content of iodine in these tumors and this fact corresponds well with the good results gained from iodine treatment. But this lacking of iodine is not constant, for according to the recent researches of Oswald, the content of iodine in the different varieties of goitre is essentially variable. It may be increased, diminished or absent, depending upon the structure of the goitre, exactly upon the amount of colloidal substance. The colloidal goitres are rich in iodine, while the parenchymatous or fibrous goitres, which show no colloidal material, are deprived of iodine. Hence the general clinical picture accompanying the development of a goitre, due to a hyper- or hypo-thyroidism.

Pathologically, there is a type of an over

active thyroid gland, where, corresponding to the over activity, there is an increase in number and size of the follicular cells and the colloidal substance is almost altogether absent but re-forming rapidly even after the removal of the gland. Due to the proliferating lining cells and the lack of support of the colloidal substance stored within the follicles, they collapse and the cells festoon into the empty follicles. The supporting tissue around the follicles, due to an increased blood supply of an over active gland, may increase and follow the cells up as they invaginate the follicles. This type is not a goitre, it is mis-named. It is merely an over active gland deprived of its secretion as fast as formed. Accompanying this pathological picture is the symptom-complex of what is rightly called hyper-thyroidism and wrongly exophthalmic goitre, Graves' disease or Basedow's disease. What stimulates the gland to over activity and causes the abundant pouring out of its secretion into the blood stream and what the effects of this over secretion is upon the various organs, especially the cardio-vascular, nervous, and muscular systems, we must leave to our very best friends, the physiological chemists. Suffice it to say that the only rational cure is a reduction of the secretion poured out, by partial removal of the gland producing it. We are supported in this idea by the tremendous experience of Kocher, Wolfer, Halsted and the Mayos.

Lesions Produced in the Neighboring Structures.—Every old goitre and of considerable volume produces in the neighboring structures of the neck and chest mechanical alterations whose practical importance is great, the greatest being those of the trachea.

The Sub-Hyoid Muscles.—At first the muscles are often hypertrophied; Kronlein proved this fact in a third of his cases at operation and claims that their contractions during inspiratory efforts may press the goitre backwards and thus increase the compression upon the trachea; and that this is one cause of death in goitre patients. Later the muscles and aponeurosis give way before the growth and stretch becoming thin and atrophied. The condition of the muscles is not an unimportant factor in the mechanical repair of the neck after thyroidectomy, and properly caring for them will prevent an asymetry and retractions of the scar.

Vessels of the Neck.—The common carotid is rarely compressed by the goitre; it is simply pushed outward and backward and its pulsations may be felt behind the sterno-mastoid muscle. Exceptionally, it is found medialward to the hypertrophied lateral lobe. (Billroth and Poncet—this should be determined). The internal jugular vein is usually compressed. The thyroid vessels, particularly the veins, are markedly dilated, which is also frequently the case with the external and anterior jugular. This is an important point since these veins are easily torn, difficult to clamp, the hemorrhage copious and an air embolism imminent.

Nerves of the Neck.—Compression of the spinal, hypoglossal, phrenic, and branches of the cervical plexus is very exceptional. And direct compression of the sympathetic is equally rare and when there exist functional troubles of this nerve it is due to indirect tension of the trunk by the intermediary of the inferior thyroid artery or compression of the thyroid branches of the sympathetic. The pneumogastric and the superior laryngeal nerves are more frequently compressed, but it is especially the recurrent laryngeal which is menaced by the development of a goitre; sometimes it is simply compressed, again it adheres to the capsule or it may be englobed and strangled by the tumor. Since this nerve supplies the muscles of the vocal cords its importance is readily seen.

Respiratory Apparatus.—Very rarely there is a compression of the larynx or of a bronchus (endothoracic goitre). On the contrary, alterations of the trachea are extremely frequent; Roux claims they exist in half the cases and Wild, who practiced tracheoscopy with a large number of goitrous patients, found only 15 per cent. with normal respiratory organs. The lesions of the trachea are usually deviations or mechanical deformations. A unilateral goitre may push and bend the trachea to the side without diminishing its lumen. The tumor may flatten out the trachea and narrow its caliber; the stenosis is generally oblique, one lobe being almost always more developed than the other. A flattening from both sides may occur with a bilateral goitre. An antero-posterior flattening especially with goitres of the isthmus and retro-sternal goitres occurs. Also a circumferential encroachment upon the lumen has been observed by Wolfer.

Along with the displacement and compression of the trachea, alterations in the walls have been observed. Softening of the trachea was described by Rose, who attributed it to a fatty degeneration of cartilaginous rings and pointed out that it played an important part in the accidents of thyroidectomy. Removal of the goitre which has served as a veritable hame, allows the trachea to collapse and be pulled together on inspiration and death may result from asphyxia. An excessive softening of the trachea is certainly rare but the operator should be prepared for this accident of

collapse on inspiration and have on hand a tracheotomy tube and small hooks to hold the trachea open.

An acute œdema of the tracheal mucosa of venous origin (congestion) may aggravate the respiratory troubles, especially during operation and on administering ether.

Emphysema and bronchitis found so frequently at autopsy on goitrous patients are the consequences of tracheal obstruction and dyspnoea.

Oesophagus.—Compression of the oesophagus, serious in retrovisceral and endothoracic goitres is often observed to a lighter degree with ordinary cervical goitres. Dysphagia exists in 10 per cent. of cases and is more marked with a tumor of the left lobe than with one of the isthmus or right lobe. Adherence of a goitre to the oesophagus is very rare; reported twice by Wolfer.

The Heart.—The heart is often affected in old goitrous patients. It is recognized, since Rose, that the right heart is frequently dilated with hypertrophy of the ventricle—Wolfer found this condition in 10 per cent. of cases. It is secondary to the impediment of the pulmonary circulation which exists in those suffering from dyspnoea. Minnich points out a general hypertrophy of the heart without dilatation, analogous to an essential hypertrophy and the hypertrophy of hyperthyroidism and like this is caused by the troubles of cardiac regulation produced by an abnormal thyroid secretion.

It looks as if the thyroid gland were primarily a sexual gland and it actually opens directly into the uterus of some of the lower animals. Certainly its functions, especially its blood supply, is influenced, augmented by pregnancy, menstruation, sexual excitement and diseases of the generative tract. The removal of an already vascular goitre, serious at any time, is especially serious during times of disturbance of the sexual cycle.

Ptosis: Report of Case, Operative Treatment, and Technique.

By R. S. Cauthen, M.D., Charlotte, N. C.

Ptosis is either acquired or congenital in its occurrence. There are varying degrees of ptosis, from a slight depression to a complete prolapse of the lids, rendering the patient blind, through an inability to raise the lids. Paralysis of the levator palpebræ superioris results in ptosis. The nerve supplying this muscle is a branch of the oculomotor. Acquired ptosis is usually unilateral, whereas congenital is usually bilateral. The case I wish to report today is a case of *bilateral acquired* ptosis, therefore it is somewhat unusual.

June 13th, 1912.—Patient; Miss E., white, age 20. Presented for treatment with the following symptoms: Exophthalmos. Ptosis of both lids, with external canthus drawn inward very markedly. Mucous membrane of upper lip sagged and everted covering the teeth when an effort was made to talk or smile. Hypertrophied and cryptic tonsils.

Just Before Operation.

History.—Up to 12 years of age health fairly good. Menstrual period began at age of twelve and was regular. Frequent attacks of tonsilitis for last ten years. At age of 14 eyes began to "puff up" and the eye balls protrude. At same time lower segment of throat (the thyroid gland) became markedly enlarged with pronounced tachycardia, but *no tremor*. Menstrual cycle continued undisturbed. For a while during the administration of thyroid extract and toasted sheep glands, improvement was noticed in all of the symptoms, but four years ago conditions came to a stand still. Thyroid extract and the toasted glands were discontinued four years ago when there seemed to be no further improvement resulting from their use. But when this treatment was discontinued the eyes began rapidly to recede and lids to hang flaccidly. As eyeballs receded the lids seemed to become more pendulous. During the last three years the skin area became thickened and blood vessels markedly developed.

Please Note:

Frequent attacks of tonsilitis;

Swelling in thyroid region;

Exophthalmos;

Lack of nervous symptoms and the swelling of thyroid gland *disappearing* and eyeballs *receding;*

Failure to be benefitted by thyroid ex-

tract and the leaving of the lids ptosed.

Treatment.—June 13th, tonsilectomy performed.

June 26th, modification of Hess' operation performed for relief of ptosis and the drawing-in of the external canthus.

Six Weeks After Operation.

Technique.—After previous shaving off of the eyebrows, a horizontal incision through the skin, along the eyebrows, the entire length of the palpebral fissure was made, and the skin undermined down to within about three m.m. of the margin of the lid. Strong silk threads doubly armed with long flat needles were used. Both needles were pushed through the lower part of the skin at a distance of about three to five m.m. from the edge of the lids. The needles were then brought out through the skin wound.

Next the outer and inner sutures were inserted in like manner about one-third of an inch from the middle one. Both ends of each suture were passed upward behind the frontalis muscle and as near the periostium as possible, and were brought out through the skin at a distance of one-half to three-quarters of an inch above the incision and tied over small pieces of rubber tubing, thus raising the lid and at the same time forming a fold in the eye-lid corresponding to the natural fold. Before tieing, sufficient tension was made on the threads to raise the lid a little more than would be normal; in other words, the ptosis was overcorrected. The skin wound closed with silk sutures.

The external canthus was widened by a canthoplasty, and two triangular pieces of skin, with their bases together, removed and sutures properly inserted to draw the canthus out to a normal width. The dressing consisted of small pieces of aseptic gauze placed surrounding the eye and the whole eye covered with a celluloid shield in order that the condition might be noted without removal of dressing and at the same time keep the eye moist during the long period of lagophthalmos. This dressing, with the sutures, was left for three weeks, the dressing being removed for the purpose of irrigation with boric acid solution once a day after the third day.

Report of Five Eye, Ear, Nose and Throat Cases Caused by Syphilis.*

By R. W. Petrie, M.D., Charlotte, N. C.

In reporting these cases I do not mean to infringe on the territory of the genito urinary specialist, as these cases were referred to a specialist in that line, who was associated with me in the treatment of the same.

Case No. 1.—October, 1910, Mr. B., age 28, single. Consulted me about eyes. Right pupil widely dilated, vision 20-200, no reaction to light or accommodation. Fundus normal. He had some pain in eye about two months before, but it passed off in a few hours. He discovered the dilated pupil accidentally about three weeks ago, but paid no attention to it, as it caused him no pain, and said he thought it would come around alright. Left eye normal. He never had an injury or any serious sickness, never had scarlet fever, diphtheria or syphilis he said. He gave no history of any primary or secondary syphilis, and had none of the ordinary signs of syphilis; in fact, I could find nothing to which I could attribute the cause of the paralysis of accommodation. I put him on strychnine, and instilled eserine into the eye twice daily for three weeks to await development; no improvement at the end of that time, and by exclusion I decided that I had a case of syphilis to contend with. A blood examination was refused. I then put him on an anti-syphilitic treatment. For a while I thought I noticed some little improvement in the eye, but finally decided that there was none. He became discouraged and quit me. When I heard from him again he had had two convulsions, was very nervous. Had lost considerably in weight, his mind very inactive and he looked bad. Some one else finally got him to agree to a blood examination, which showed a positive Wassermann reaction. Two doses of 606 was given and this followed with mercury. He still has the dilated pupil, but all the other symptoms have disappeared and he says he feels like a new man.

*Read at Seventh District Medical Society meeting, Wadesboro, N. C., December 3, 1912.

Case No. 2.—December, 1911, colored woman, age 25, married for several years, no children. Complained of pain in right eye for about 10 days with blurred vision, lacramation and photophobia; distant vision 20-200, iris dull, pupil irregular and inactive, ocular conjunctiva red. Had sore throat; mucus patches all over mouth and throat, also typical skin lesions. The usual local treatment for iritis was given. She refused to take salvarsan and I put her on proto iodide of mercury ¼ grain four times daily. In three or four weeks she seemed well and I dismissed her and told her that she seemed well, but that she was not well and would have to continue this treatment for two or three years in order to get well, and that if she did not take the treatment all these symptoms would return. In a few weeks she returned to me with a bilateral iritis, had lost in weight, was weak and anæmic, and had all the visible manifestations of syphilis again, said she thought she was well and had left off her pills. The mercury was increased gradually to ½ grain four times daily with the local treatment for the iritis. I finally got the pupil fairly well dilated and she began to improve again, and in three or four weeks was in fairly good condition when she quit me for a time. Some months later she came in again almost totally blind, eyes painful and very sensitive to light, had only light perception, could see light from my window only, was very much emaciated, and so weak that she had to be carried to and from my office. I insisted that she take the 606 treatment, and she consented to do so. I sent her to the hospital and had it given. When I saw her 24 hours later she was sitting up in bed and said she felt a great deal better; practically all the eye symptoms had disappeared and vision greatly improved, distant vision about 20-100. She went home the following day and said she felt well except was still weak. In two weeks she had the second dose of 606. She seemed well for a while, but later unfavorable symptoms appeared; she was then put on mercury and all symptoms disappeared. Now she tells me she is alright so long as she takes the pills, but when she leaves them off she gets worse again.

Case No. 3.—March, 1912, Mrs. W., age 35. Consulted me about an ulcer in nose. She said it had been there several times before, but by using a little salve would disappear in a few days, but in a week or two would return. She was nervous and worried about it, thinking possibly that it might be cancer; also she had post-nasal catarrh. I treated her locally for a few days and the ulcer healed. I told her if she had any more trouble to come back to see me. In May she came back with the same trouble; she had lost in weight and was very weak and nervous; said she would go all to pieces about nothing and could neither eat nor sleep. At this time I got a history of her husband having had some venereal disease six or eight years ago, but she did not know the nature of the disease. She gave no history of syphilis and had none of the symptoms except being nervous and some pain or tenderness over shin bones. A blood examination was made with positive results. A dose of 606 was given with very little or no improvement; she was then put on proto iodide of mercury and in one month all the symptoms disappeared.

Case No. 4.—May, 1912, Mrs. H., widow, age 38. Says husband died with tuberculosis and is afraid she has it, has hacking cough and says throat is sore, is very nervous, sallow complexion, no appetite, lost considerably in weight, and not able to sleep more than an hour or two in 24 hours. On examination of nose and throat I found septum deflected and turbinate bodies swollen, with post-nasal and laryngeal catarrh. Says husband had syphilis 15 years ago, but she did not live with him for 18 months following this, and not for six months after the doctor said he was cured, has had two healthy children by him since that time, and one miscarriage between the two children. There were no glandular enlargements and no history of any primary or secondary syphilis, but being unable to account for the nervous condition I advised a blood examination. This was done and found to be positive; salvarsan was given with very little relief, she was then given mercury and in a short time was apparently well.

Case No. 5.—June, 1912, Miss S., age 36. Woman of easy virtue. Had usual diseases of childhood, but denied ever having had syphilis. About two months before had severe pain in right side of face, marked tenderness over the maxillary antrum, pain in right eye and severe headache, with pain and deafness in right ear, and later throbbing or dragging pain over the maxillary antrum. When I saw her all these symptoms had disappeared, but I found a lump in the muscle of the right cheek the size of an English walnut, the whole right side of the face was larger than the left, jaws stiff, and painful when an attempt was made to open the mouth. Patient nervous, lost in weight, no appetite, and unable to sleep.

On examination of nose I found inferior turbinate hypertrophied and polypus in right nostril. A solution of cocaine and adrenalin was applied to turbinate, and pus was seen draining from beneath the middle turbinate. The polypus and inferior turbinate

were removed. I treated her locally for about 10 days, also gave her tonic. The nasal symptoms disappeared, but the lump in the cheek still remained. I also found a lump the size of a partridge egg over the right clavicle, the nervous symptoms becoming worse, shin bones tender, in fact no improvement except that I had gotten rid of the pus and had her breathing through her nose. A blood examination was made and a positive Wassermann was the result. Salvarsan was given and in two weeks all the symptoms were gone, and she said she felt good; a second dose was given in 14 days. When I saw her two months later the nervous symptoms had returned; she was then put on mercury and all the symptoms disappeared. She says she feels entirely well, but is still taking the mercury.

In conclusion I wish to call attention to the pronounced nervous symptoms in these cases. I believe if a Wassermann examination was made in all these chronic nervous cases, where no apparent cause is found, that we would find syphilis to be the primary or underlying cause of a great many of the so-called neurasthenic and hysterical conditions. Invariably in the extreme nervous conditions we have found a positive Wassermann reaction and the most happy results following the salvarsan and mercury treatment.

Some Reasons for Eliminating Meat From our Diet.

By J. H. Neall, A.B., M.D., Atlanta, Georgia.

The most desirable food is one that will supply the needed nourishment with a minimum of wear and tear on the organs of elimination and assimilation. Flesh meat furnishes one of the needed elements of our diet, but along with this element one must take the extractives. Among these extractives are creatin, creatinin, zanthin, hypozanthin, lecithin, urates and other purins which are found in the urine. With these products circulate poisons that cause uræmic poisoning when retained in the system as in Bright's disease, ending in death.

To determine the toxicity of these products the following experiment was performed: A young man who was a vegetarian was given nothing but meat to eat for a period of two entire days. A twenty-four hour specimen of the urine of this young man, before he was placed on the meat diet, was collected, and was found to contain twenty-four grams of urea and allied products. After being on the meat diet for forty-eight hours, a twenty-four hour specimen of urine showed approximately ninety-six grams of urea and other waste products. Two rabbits of nearly equal weight were selected, and these two urines injected into the veins of the two rabbits. The urine from the man when on the vegetarian diet required four ounces to kill; and the urine from the man when eating meat required but one ounce to kill, thus showing that a strictly meat diet contained four times as much poison as a strictly vegetarian diet. In other words, the urine of the meat eater is four times as toxic as the urine of the vegetarian. The kidneys of the meat eater, therefore, have four times as much work to do in eliminating these poisons as the kidneys of the vegetarian. It was computed, supposing a pound of man and a pound of rabbit to be equally vulnerable, that had the kidneys suddenly ceased to act, resulting in urinary retention, that on a strictly vegetarian diet the man would have lived forty-eight hours; while the man on the strictly flesh diet would have lived only twelve hours, indicating that the urine of the one whose diet was wholly of meat would be four times as toxic as the urine of one whose diet consisted entirely of non-flesh food.

But the meat eater draws heavily from the products of the vegetable kingdom for, say one-half of his diet, so that it may be roughly estimated that the kidneys of a person that lives on a mixed diet have approximately double the amount of work to perform that the kidneys of a person that lives upon a diet from which all meat is excluded. Statistics show that every twelfth adult dies of Bright's disease of the kidneys. The kidneys become inflamed and irritated from overwork in removing meat poisons from the blood stream. They are equally as irritating to the kidneys as alcohol. The kidneys have a normal amount of work to perform in removing the products of tissue metabolism. Now, if in addition to this ordinary work we add the extraordinary labor of removing the urine remaining in the tissues when the animal was slaughtered and which would otherwise have passed through the kidneys of the animal, we at least are not economical with the energy of these important organs of excretion.

These extractives are nerve excitants and irritants that have a stimulating effect. Two centuries ago they were prescribed after their passage through the kidneys as a tonic for a convalescent from a fever. A noted chemist says "Leibig's beef extract, panopeptin, and similar products are veritable concoctions of poisons." These preparations, as we know, are prepared for the market by boiling the meat which coagulates the albumin and leaves the waste products in solution to be bottled and sold.

"The only difference," says Dr. Herr, of

Cleveland, "in the method of prescribing the product of animal excretion two hundred years ago and today is that then these wastes were collected after passing through the kidneys and today they are obtained from the tissues before they reach the kidneys." Were things called by their right names, and if a man would stop to consider what he is eating when he calls for an order of pork chop,.or "juicy" beef steak, there would be fewer stomachs serving as cemeteries for the dead carcasses of animals. Meat stimulates the lower passions and hence is a diet undesirable for growing children. The free use of meat irritates the nervous system, and renders a child irascible, with a temper hard to control.

Normal Proteid Ration.—Prof. Chittenden, Sheffield School of Sciences, Yale University, in a series of experiments, covering a period of fifteen months, and in which college professors, athletes, and soldiers were the subjects, demonstrated to the satisfaction of the American Medical Association, and the Medical World, that the accepted ration for man's average daily diet of three ounces of proteids was nearly double the amount actually necessary to maintain man in a condition of perfect health, in full strength, where in-take and out-put of nitrogen in the body were equal.

He discovered that a minimum of fifty-three grams, or a little over one and a half ounces of albumin was sufficient. When meat is taken as a part of the daily diet, this amount is easily exceeded. Lean meat consists wholly of proteid elements and were the extractives entirely removed, and only the meat fiber retained, the objection to meat would still hold good on the score of excess of proteid. Such foods as peas, beans, lentils, oatmeal, nuts, eggs, and cheese contain an abundance of albumin for the requirements of the system. If now, in addition to these we take flesh meats the system is sure to be burdened with nitrogenous excess. On the other hand, if one partakes of a non-nitrogenous diet, rich in starches, sugars, and fats in excess, the system is better able to dispose of the surplus, as from five to six times as much of these products are required to supply the heat and energy. Then, too, these products can be safely stored in the liver in the form of glycogen, which may be used later by the system.

But not so for the proteids, for any excess over the three ounces, (Chittenden says one and one-half ounces) becomes a burden to the system, and must be converted into crystalline extractives and eliminated. This entails a drain upon the organism. The nitrogenous excess clogs the system, resulting in what is commonly called biliousness, languor, coated tongue, constipation, drowsiness, headaches, and a sluggish action of the muscular and nervous systems. The brain is blunted, thoughts flow slowly and uric acid and the urates fill the tissues and blood. As a result we have such uric acid dieeases as colds, catarrh, rheumatism, and gout. While we do not think that the theories of Dr. Haig, of England, have scientific demonstration in regard to uric acid in the blood, we find it to be a fairly good working hypothesis until something better can be proved.

Diseased Animals.—Thus far we have been speaking of healthy, or supposedly healthy, flesh meat, but how much meat on the markets is from sound and perfectly healthy animals? The State of Massachusetts spent in one year, one million dollars, slaughtering tubercular cattle. The condition found there is a fair sample of what exists elsewhere throughout the United States. Dr. Vaughn, Dean of the Medical College of Michigan, went through the southern part of Michigan, and by means of the tuberculin test examined herd after herd of Holsteins and Jerseys, finding thirty to fifty per cent. suffering from tuberculosis. A report in the "New York World," dated June 6, 1909, reads as follows: "Clad in the blood-bespattered garb of a butcher, Governor Tanner watched the slaughtering of twenty-seven head of cattle, which were examined for tuberculosis. The cows came from the Lowe Dairy Farm, in Sangamon county near Springfield, which had been furnishing the Governor and other occupants of the executive mansion with milk, butter, and dairy products. The examination proved that the animals were suffering from tuberculosis in a most violent form. Governor Tanner said, 'This settles it, I quit eating meat.'"

While we are well convinced that the greatest danger lies in the ingestion of the human tubercle bacilli by inhalation or alimentary infection, yet the Royal Commission of England, after seven years of work, find that "there is no doubt but that a certain number of cases of tuberculosis, occurring in the human subject, especially in children, are the direct result of the ingestion into the human body of the bacilli of the bovine type." Out of sixty-four cases investigated by them, they found fourteen undoubtedly of bovine origin. None of these fourteen were in pulmonary tuberculosis, but were from glandular cases. One of the inspectors in a Chicago slaughter house said that "If they should reject every animal that is diseased, meat would cost a dollar a pound." Since actinomycosis is prevalent in sheep, cholera among hogs and hens, and cancer in all species of animals,

it has become a positive menace to life to partake of this kind of diet

Endurance Test.—It is a mistake to suppose that muscular strength and endurance depend upon the use of animal foods. The needs of the system can be better supplied, and more vigorous health can be maintained without its use. The grains, fruits, nuts, legumes, and vegetables contain the nutritive properties to make good blood. These elements are not so well supplied by a flesh diet, for not only have the vegetable products lost energy in their passage through the animal, but they have taken on waste products.

Professor Fisher, of Yale University, recently undertook a series of experiments for testing the endurance, covering thirty-four persons; professors, students, physicians, nurses, and others who were: 1st, athletes accustomed to a meat diet; 2nd, athletes accustomed to a non-flesh dietary. These tests were made: 1st, in holding the arms horizontally as long as possible; 2nd, deep knee bending; and 3rd, leg raising with the subject lying on his back.

The following summary of results is given by Prof. Fisher, who personally supervised the tests:

	Arm Holding		Deep Knee Bending		Leg Raising	
	No. of Persons	Aver. Record	No. of Persons	Aver. Record	No. of Persons	Aver. Record
		Min.		Times		
Flesh eating athletes.....	15	10	9	383	6	279
Flesh abstainer athletes.....	19	39	16	927	6	283

In arm raising, the vegetarians' average doubled the maximum effort of the flesh-eaters. Nine exceeded one hour, and one reached three hours and thirty minutes. Not one of the flesh-eaters reached the half-hour mark. In the knee bending only one flesh-eater exceeded the 1000 mark; while two vegetarians exceeded the 2000 mark; and one reached the 5000 mark.

Prof. Fisher thus sums up the results of his carefully conducted experiments: "The results of the comparisons would indicate that the users of a low protein diet, and non-flesh dietary have far greater endurance than those who are accustomed to the ordinary American diet." These tests afford most remarkable and convincing testimony to the superiority of a vegetarian diet as a means of promoting endurance. The effect of a meat diet may not be immediately realized, but that is no evidence that it is not harmful. "Few can be made to believe that it is the meat that they have eaten which has poisoned their blood and caused their suffering." "Many die of diseases wholly due to meat eating, while the real cause is not suspected by themselves, nor by others."

I dare say that, could the facts be known, it would be found that the present high price of meat and the consequent forced abstenance therefrom would show a proportionate diminution in the use of alcoholic liquors of every kind as well. Tobacco and meat cause a rise of blood pressure, as manifested in congestive headaches. Alcohol, on the other hand, by dilating the capillaries, causes a fall of blood pressure. To relieve the discomforts caused by a rise of blood pressure, men naturally resort to the use of intoxicants. It is noted that those who become vegetarians and in whom there is an immediate fall of blood pressure, naturally give up the use of tobacco and alcohol.

I quote from the Washington Herald of the week of January 23rd, as follows:

"BUTTONS WORN IN BALTIMORE."

"BALTIMORE A NEW CONVERT TO THE ANTI-MEAT EATING CAMPAIGN.

"The fight there is being aided by the Federation of Labor, and its 103 affiliated unions. An order was placed for 50,000 buttons, bearing the inscription: 'I don't buy meat. Do you?' These buttons are to be distributed to the various unions in the city and passed out to the members that take the pledge. A committee is engaged in drawing up resolutions which will be presented to the Governor of Maryland asking for the appointment of a commission to inquire into the increased cost of living.

"The Baltimore unions are preparing to appeal to the commercial bodies of the city asking their aid in keeping down the sale of meat. The women of Baltimore are joining in the movement, and it is expected that several women's clubs will endorse it within a few days."

A proportionate diminution in the consumption of tobacco and alcohol may be expected.

The editor of the London Clarion some

time ago related his experience in an editorial. He said:

"I have just turned vegetarian. My friends are surprised; so am I. But, whereas they are surprised that I have adopted this diet, I am surprised that I did not do it years ago. In one way, the effect of the diet has surprised me. I have been a heavy smoker for twenty years. If there was anything which I feared my will was too weak to conquer, it was the habit of smoking. Well, I have been a vegetarian for eight weeks, and I find my passion for tobacco is weakening. Again, I have found that I cannot drink wine.

"Why do I write these confessions? Because these things have come upon me as a revelation; because I begin to see that the great cure for the evil of national intemperance is not a teetotal propaganda, but vegetarianism."

It will be noticed that in this man's case, what his will was too weak to conquer while subsisting on a meat diet, he had no difficulty in giving up after he had eliminated flesh from his dietary. The Salvation Army in some of its homes for inebriates, has adopted a fleshless diet with good results.

"One reason why the desire for drink is confined to the human family is that among all creatures aside from man, a simple diet is the rule. The horse is content with his simple meal of unseasoned oats; no mustard nor pepper need be added to give him a relish for his hay, and he craves no drink aside from the pure sparkling water."

Now in summarizing our paper, we learned that even in the use of the flesh of healthy animals the kidneys are given increased work; that there is a great risk of contracting disease from unhealthy animals; that there is great probability of overstocking the body with proteids, and clogging the system thereby, in eating flesh food; that in tests of endurance the vegetarian shows superiority over the flesh-eater; and lastly, that abstenance from flesh is an adjunct in the fight against intemperance, and even a help in breaking from the use of tobacco.

Medical and other authorities quoted: Dr. Vaughn, of the University of Michigan; Dr. D. H. Kress; Prof. Chittenden, Yale University; Editor of the London Clarion; Dr. A. L. Herr, Cleveland, Ohio; Prof. Fisher, of Yale University; and Mrs. E. G. White.

236 Gordon St.

Ileo-Colitis.*

By C. D. Thompson, M. D., Lincolnton, N. C.

Gentlemen of the Seventh District Medical Society:

I have chosen for my subject a disease which is more or less prevalent at this season of the year, and which is as a rule difficult to manage; one that I have had considerable experience with which was more or less satisfactory.

I will try and give a brief description and treatment for same. I will deal more particularly with the acute form, but some of the measures will apply to the subacute and chronic form also.

This is an inflammatory condition of the intestinal mucous membrane, particularly of the ileum and colon.

Etiology.—The causes are principally bad food, bad habits of feeding, hot weather predisposing, although in the Fall with exposure to cold many cases develop, or it may complicate the infectious diseases. Bacteria play a prominent part in the cause.

Pathology.—The lesions are found principally in the ileum and colon spreading in both directions from the ileocecal valve. In a few cases the ileum only, in a larger number the colon only is involved. Mild cases have only a catarrhal inflammation of the mucous membrane with swelling, congestion and increased production of mucus. In more severe cases the entire intestinal wall is thickened and small hemorrhagic spots may be seen. When the inflammation is very severe and prolonged small ulcers appear in the mucous membrane. The most severe form shows lesions of croupous inflammation.

Symptoms.—Some attempt may be made to connect certain symptoms with one or the other of the above conditions or pathological lesions, but the cases vary very much in their clinical picture and such attempts are often ineffectual.

The cases, except the follicular form, which is more of a subacute process, begin suddenly with vomiting, diarrhoea, abdominal pain and fever. The stools at first are fecal, but soon become mixed with blood and mucus. They are very frequent, each one small in amount and preceded by pain and followed by rectal tenesmus. There is very little disagreeable odor to these stools, the odor occurring in the late stools of prolonged cases. In the follicular variety the stools are less frequent and blood is less commonly present.

In the membranous variety mucus and blood are present in large quantities, and

*Read by title at Seventh District Medical Society meeting, Wadesboro, N. C., Dec. 3, 1912.

shreds of pseudomembrane add a diagnostic feature to the case.

After a few days, in all the cases, the stools gradually assume a dark brown or greenish brown color. The temperature at first averages 103° or 104° F., but as the disease progresses it falls some, but continues above normal as long as the inflammatory process is present. At first there is not so much prostration, but as the case progresses the prostration increases.

There is anorexia, but increased thirst, the abdomen is distended and tender over the colon. The child loses flesh and strength, the pulse becomes rapid and feeble and the respiration weak and irregular. The skin of the buttocks becomes excoriated. The tongue is coated or red and glazed and they frequently have some form of stomatitis. Nervous symptoms are restlessness, irritability, and convulsions, and sometimes stupor and coma ends the scene.

Early symptoms of improvement are less mucus and blood and less frequent movements, and subsiding of constitutional symptoms. Convalescence is usually slow.

Diagnosis.—There are two diseases which it may be confounded with, viz.: Typhoid fever and intussusception; the symptoms of intussusception in particular are very much like those of ileo-colitis except the fever in ileo-colitis, and the tumor, and finally constipation of intussusception.

The general symptoms of typhoid fever will usually serve to differentiate the two.

Prognosis is always grave, depending upon environment and attention. The treatment is a very difficult problem in a great many instances. All milk is to be stopped at once whether the patient is breast-fed or bottle fed. Barley water and rice water should constitute the basis of the diet for very young children. In older children we may add to these foods an ounce or two of chicken broth or mutton broth with salt or a small amount of sugar. These foods should be alternated. In this way they will be taken better and for a longer time than if one is fed alone at a time. The intervals of feeding may be a little shorter and a little less food given at a time.

Drugs which have proven of most value are calomel, castor oil, the subnitrate of bismuth and opium. Others of value are sulphur, and preparations of tannin, as tannigen, tannalbin, tannopine, etc. Stimulation and heat are used as indicated. From one to two grains of calomel are to be given, ¼ grain every ½ to 1 hour, castor oil following if it can be retained. One of the best ways of giving bismuth in this condition is to combine it with Listerine and liquid Takadiastase. If black stools do not follow its administration, one grain of sulphur should be added to each dose. The bismuth must be given in large doses to obtain results. When there is much pain and tenesmus with frequent scanty, mucus stools, opium may be used to control the tenesmus and diminish the frequency of the stools. Dovers powder or paregoric is the best form to give opium in. Dovers powder is the better of the two. It may be added to the bismuth at each dose, not combined with the prescription, as thus it may be discontinued or the dose made smaller as the case may demand. All cases may not require opium. When giving opium the nurse should be cautioned that when the temperature rises or the patient becomes drowsy to discontinue it. When there are large watery stools or an abundance of mucus the preparations of tannin give good service. Tr. strophanthus is the best heart stimulant. Hot compresses or stupes are grateful when there is much pain.

Colonic irrigation should be used in some cases oftener than in others, normal salt solution at a temperature of 100° to 105° or a weak antiseptic solution should be used. If the patient fights and strains against the irrigation and there is no diminution in the number of stools it should not be used. In severe tenesmus and much bloody mucus I have used starch water and laudanum with very good results.

In convalescence the problem of diet is a very vexing one, and we have to be very careful in returning to a milk diet, doing so cautiously and with fear and trembling, beginning with a small quantity of skim milk or condensed milk added to the carbohydrate gruel, and if necessary to sweeten it should be done with sugar of milk.

I would be glad to have this disease, and particularly the treatment, freely discussed, as to my mind it is one of the most serious conditions with which we have to deal.

Prognosis of Gonorrhea.*

By Dr. F. D. Austin, Charlotte, N. C,

"A gonorrhea begins and God alone knows when it will end," said Ricord more than a generation ago. We might truly paraphrase it another way: A gonorrhea begins by a local infection and God alone knows where it will end.

Where there are no glands gonorrhea runs an acute course and then disappears, but in the genital passages it shows a marked tendency to become chronic by causing chronic glandular catarrh and peri-glandular sclerosis.

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*Read before the Mecklenburg County Medical Society and the Seventh District Medical Society.

From the male urethra the gonococci usually disappear within six months. Persistence of the gonococci for more than 18 months in the male urethra is exceptional. The catarrh may well continue longer than this, but it is kept alight by the other microorganisms that persist after the gonococci have disappeared.

In a few cases the gonococci remain alive and at least potentially virulent for 2 to 3½ years proves the possibility of an indefinite infectiousness.

Usually the first attack is most severe, but most liable to recover without stricture. Later attacks are apt to follow with a repetition of the complications.

It is often noted that when an individual has had chronic gonorrhea for months or years, that the gonococci when transplanted into the tissues of another person are not capab'e of producing such virulent inflammatory symptoms, as if taken from a fresh case.

This attenuated virulence would seem to explain the fact that in such cases the period of incubation is comparatively long, the purulent discharge is scanty, and the case often becomes chronic, resulting in stricture and prostatitis, This course and termination is probably due to the fact that the irritation is too slight to cause enough phagocytosis to rid the tissues of the invading organism.

Another condition which influences the prognosis of gonorrhea is the state of the patients general health. A person of strumous, anæmic and general debilitated condition is apt to run a sub-acute but exceedingly protracted course.

The chief causes which retard recovery may be classed as follows:

1. Complications, posterior urethritis, prostatitis, epididymitis, cystitis and arthritis.

2. Re infection from a suppurating urethral gland, from infected seminal vesicles, prostate, etc.

3. Lack of rest.

4. Drinking alcoholic stimulants.

5. Using injections too strong or too frequent.

6. Broken down constitution, T. B., etc.

7. Premature coitus.

The prognosis of gonorrhea in women is much more grave than in men. Acute gonorrhea in the female urethra differs in no way from that in the male, but the anatomical differences of the female genital organs from that of the male makes it much easier for the gonococcus to produce anything from a gon-urethritis to a geperal infection of the vulva, vagina, uterus, tubes, peritoneum, conjunctiva, endocarditis, arthritis, septicæmia and pyæmia.

The inhibiting influence of gonorrhea upon the procreative capacity of women should demand our most serious consideration, for to this disease the largest percentage, about 80 per cent., of sterile marriages may be ascribed.

The so-called "one child sterility" is accounted for in a vast majority of cases by the pre-existing gonococci infection which attacks the corpus and tubes during the puerperium.

It is estimated by the leading authorities that 60 to 80 per cent. of the operations on the female genital organs is a direct or indirect sequela of a pre-existing gonococci infection.

Gonorrheal salpingitis predisposes to ectopic pregnancy by distorting the course of the tubes and destroying the ciliated epithelium from the endo-salpinx.

It is also estimated that at least one case in seven of puerperal sepsis is caused by gonorrhea.

The risks to the offspring while not so serious as in syphilis are not to be underestimated. In the passage of the child through the maternal parts it undergoes, as Morrow has expressed it, "A veritable baptism of virulence."

The conjunctiva becomes infected and blindness will follow unless it is treated rightly. It is estimated that 30 to 50 per cent. of ths blindness of the world is due to the gonococcus infection.

It is common to hear women who constantly suffer from uterine torture employ such words as these: "When I was a girl I was quite well. It is only since my marriage that I have become ill," And every day this confidence, this plaintive refrain saddens the gynecologist. It is continual and inexorable. From the discolored and suffering faces we may guess a whole past of debility, and the origin is always marriage.

The husbands have quite a conscience. They go about their business or to the clubs, create fresh pleasure or new relations for themselves, and desert the mournful marriage bed. They can reckon on sympathy, for who does not pity them for having married wives with such bad health? We cannot fail to be struck when our patients make such remarks as the following: "I was married two years after my infection, and believed myself perfectly cured, when two months later I suffered from a slight discharge." Was your wife ill? "Oh, no, she never knew anything about, it thank God. But now, alas, Doctor, I lost her. She died of puerperal fever after her first accouchment, the year that we were married."

Closure of Abdominal Incisions.*

By L. N. Glenn, M.D., Gastonia, N. C.

The closure of abdominal incisions is one of the most important parts of a laparotomy and one that should receive perhaps more consideration than it does. In the first place it is assumed that the incision has been properly made, as upon that depends a great deal.

An incision with ragged edges or traumatised tissues apposed will not likely be followed by proper union, no matter how well the incision might have been closed. No operator ought to make a small skin incision followed by a larger peritoneal opening and have to damage the tissues trying to close the peritoneum out of sight under one or the other end of the wound, nor should he try to work through a too small incision and thus injure the tissues to be closed.

Granting, then, that we have a clean, properly made incision to deal with we shall undertake to close it.

The extreme ends of the peritoneal incision should be located and kept as a guide. This may be done either with a small clamp forcep or, as some operators do, use a small blunt hook for these ends. The sides then should be caught up with small forceps and lifted well up in situ.

Now the question of what material shall be used for suture is one over which many operators differ. We can scarcely say that any one thing is better than anything else. My preference is to use the best plain No. 1 cat-gut obtainable and use this doubled. First introduce it at the lower end of the incision and in this first stitch include a few fibers of the deep fascia to keep the bladder from dragging down the wounded peritoneum with its consequent pain and discomfort.

This stitch should be tied only snugly tight and the back end of the suture cut off closely. With this start so made the entire opening is quickly closed with a running stitch, using the double thread and not having to stop to thread the needle. The upper end is closed lightly and cut off as closely as the safety of the knot will allow. Some operators turn back after this knot is tied and close the fascia with the same double No. 1 plain cat-gut. This is very good in some cases, but where there is much tension or weight to be encountered I prefer to use a plain No. 2 cat-gut for the strong fascia, using it doubled as in the first case.

Chromic cat-gut has its strong advocates here, and I use it too, but must say that unless some special reason directs me I prefer to use the plain material. In closing this fascia great care should be used to not catch and strangle fibers of the rectus muscle, or any other muscle for that matter. Often at this juncture one might reinforce the fascia closure by allowing one of the edges to slightly overlap, and after closing in that way, return with a running suture and whip down this surplus edge onto the original closure. This is not a bad idea at all in cases where there is much tension or great weight or a specially unruly or nauseated patient. The fat and subcutaneous tissue then should be closed snugly, and may be done with a plain No. 1 cat-gut with the stitches not too close together. The skin offers us a field for many differences of opinion, each operator having ideas of his own and thinking them the proper way, of course.

The kind of material to use and the way to use it being the things for discussion. Cat-gut has its friends and often they are right.

Silk has its friends and they think they are right. Horse-hair has its followers and they depend on it. Silver wire has almost lost out, while the metallic clamp devotees are striving to add recruits to their small number.

The black linen now in use is perhaps here to stay and is rapidly finding favor. This is the material practically always used by the Mayos unless horse-hair, one of their favorites, is used.

During a months stay with the Mayos recently I didn't see silk used a single time anywhere for anything by any of their operators.

Personally, I am rather inclined to use a medium sized twisted silk as there can be no reason for its not being sterile.

The way to use whatever material is selected is still open for discussion. I rather prefer to use a somewhat deep suture and then return over the same field with a very shallow apposition suture.

This is the old relaxation and apposition stitch of Bryant, and is certainly worthy of consideration before condemnation. The relaxation is secured by the first row of sutures while the second row is depended on for perfect apposition.

The users of chromic cat-gut have many arguments to commend it and it is certainly a most excellent material for specific uses, but in abdominal closures I seldom use it.

The subject of drainage is one not to be ignored. If there be oozing or slight hemorrhage it should always be stopped if at all possible, but where a certain amount of it persists there should be made provision for it by inserting a few strands of cat-gut for a day or two, or a few threads of large silk.

*Read at Seventh Medical Society, at Wadesboro, N. C., December 3, 1912.

Most emphatically, it will not do to allow liquid accumulations beneath any of the apposed layers.

One of the most dangerous things in these closures is the dead space that will occur if not careful to avoid it. There should always be complete apposition of every part of each side of the wound with its fellow on the opposite side. In cases of thick abdominal walls the button sutures or quilted or quilled sutures may be used, but I must say that the quilted skin suture has given me trouble from cutting off local circulation. No stitch in either of the layers should be tight enough to cut off the circulation for obvious reasons.

Needles to be used brings up another question but one upon which we can more nearly agree than upon some of the former subjects.

Any needle that does the least traumatism is a good needle. In the deep sutures a round needle is to be preferred, while a cutting needle may be used in the skin. If a cutting skin needle is used it should not be allowed to cut parallel to the incision as the thread will promptly give a gaping needle wound. Always let it cut at right angles to the incision.

Tension sutures placed an inch or so away from the edges of the incision are used by many operators, but I seldom use them. If used they may be of silk-worm gut or silk or silver wire.

In certain selected cases I am rather fond of the buried silk skin suture running from one end of the incision to the other just beneath the skin margins, dipping in and out from side to side alternately. In using this stitch there must be used extreme care to prevent dead space just beneath it.

In conclusion, I shall advocate no hard and fast rules as to any of the points at issue but shall certainly expect each particular case to be treated as its peculiar indications might direct.

Do not be a slave to any material, to any stitch, to any surgeon's plan or idea, but use whatever seems best and in such way as seems best.

The very best possible apposition of such tissues as were separated and then placed together with tension enough to keep them there a reasonable length of time, and no more tension than is adequate is good surgery.

Does Alcoholism in Parents Injure Children?

By S. M. Crowell, M.D., Charlotte, N. C.

It is not my purpose in this short paper to lay claim to anything especially new nor original; in fact, a large part of it may be only an abbreviated compilation of observations of more or less eminent men.

Especially for recent years, the question of heredity, acquirement, and feeble mindedness, defective mentality in children and "eugenics" have been a very live topic of discussion among physicians and scientists. Much has been discovered, but in this field there *has been* and *still is* a good deal of confusion.

Heavy drinkers, or alcoholics, may be also degenerates and may drink because they are abnormal to *start with*. In fact, this is certainly *true* of some of them. But on the whole, alcoholism must *increase* the degeneracy.

In the outset, let me state that I shall not attempt to discuss the merits of heredity, transmissibility, acquirement, atavism, etc.; for the present, I shall content myself by accepting the literal translation of that passage in Holy Writ which tells us that a jealous God will visit the iniquity of the fathers upon the children unto the third and fourth generation of them that violate His laws.

Perhaps among the most able and noted scientists who is devoting much valuable time and study to this all important subject is Dr. Chas. R. Stockard of the Cornell Medical School. Recently this eminent physician has shown that alcohol could produce in normal parents a condition which caused them to give rise to defective or deformed offspring.

As a working basis we must keep in mind the following fundamental facts: First, the normality of an offspring depends upon two factors—the perfection of the germ-cells from which it arises, and the nature of the environment in which it develops. The germ-cells in either parent may be modified before conception, by habit of the parent, and thus affect the progeny detrimentally, or the embryo in utero may be modified and influenced by the habits of the mother during the period of gestation, thus giving to the world an individual with an unstable diathesis which, in all probability, will result in an inebriate, degenerate or some sorm of monstrosity.

Working with chickens, fish and guinea pigs, Dr. Stockard has taken perfectly normal animals, made them alcoholic, or treated them with some other anæsthetic and observed the difference in their young born during the period of normality, or prior to taking the alcohol. He has shown that as high as 96 per cent. of eggs treated with alcohol gave rise to abnormal individuals. The nervous system and organs of special sense were generally affected, beginning with the central nervous system, then the

*Read at Seventh District Medical Society, Wadesboro, N. C., Dec. 3, 1912.

organs of special sense, this being the order in which alcohol affects the adults except it is physiologic in the latter, and *pathologic* in alcoholic young.

Drs. Stockard, Sullivan and others have shown that the human beings suffer much the same effects from similar causes.

Dr. Stockard, in his studies, gave male and female guinea-pigs alcohol by inhalations until they began to show signs of intoxication—though not completely intoxicated. They were thus treated for an hour at the time, six days per week, for 19 weeks, when they were in a state of chronic alcoholism.

Of this class of pigs suffering from chronic alcoholism, he made 55 matings, 42 of which reached full term, and were delivered and registered. From these 42 "matings" only seven young animals lived, and five of them were unusually small, though their parents were large, vigorous guinea-pigs.

As a working hypothesis, perhaps, the following classification will best serve our purpose, the classification being in reference to the effect of alcohol upon the parent and progeny.

The Paternal Test.—In making this test, *alcoholic* males were mated to *normal* females, and this is the crucial proof of the influence of alcohol on the germ cells, since the defective offspring in these cases *must* be due to the modified spermatozoa, or male germ-cells, from which they arise. The Dr. made 24 matings of this type, 14 of which gave no results or very early abortions; five *still-born* births were produced, consisting of eight individuals in all, and five *living* litters consisting of 12 young. Seven of the 12 died soon after birth and only five survived. Four of the survivors were from one litter, and the fifth is the only living member of a litter of three.

The Maternal Test.—In this *normal* males were mated with alcoholic females. In such cases the alcohol may affect the progeny in two ways: by modifying the germ-cells of the mother or by acting directly on the developing embryo in utero. Only four such matings were tried. One gave no offspring; three living litters were born, and one consisting of three premature young that died at birth, while the other two litters consisted each of one young, which lived. The alcoholic treatment in one of the last cases was only begun after the mother had been pregnant taree weeks.

The Pater-Maternal Test.—Alcoholic males were mated with alcoholic females; and is the most severe and appalling demonstration of the baneful effects of alcohol upon parent and progeny. Fourteen such matings gave, in 10 cases, no offspring or very early abortions. Three still-born litters were produced, consisting in all of six individuals, while only one living young was born. This single offspring from the 14 matings died in convulsions on the sixth day after birth. All the young that died showed nervous disorders, many having epileptic-like seizures and dying in convulsions.

The Control, or Normal Matings.—Of this same group of animals, nine normal matings of the pigs were made which gave nine living litters, consisting in all of 17 individuals, all of which survived and were normal, large healthy animals. Only two of this control mating died and their death, perhaps, was due to an acute malady contracted from their mother which died two days after labor.

While Dr. Stockard's experiments have been confined to these lower animals, we know from his and other scientific observations that the human being is amenable to just the same laws and variations as those observed in the lower animals. Perhaps in the studies of Charles Sullivan we have a typical illustration of the effect of alcoholism in parents upon the children. In his study of 600 children born of 120 alcoholic parents he showed that over 55 per cent. died before the age of two, while many of the survivors were epileptic, tuberculous and geuerally weak. A large number of the children that died lived hardly at all, and the proportion increased among the later births.

In conclusion, the effects of alcoholism in the parent upon its progeny seems to be an established fact and the American people are recognized consumers of the stronger alcoholic drinks. This being true, it seems to me that our duty is far too great to relegate to the women, temperance societies and lecturers the subject of temperance. Is It not our duty as men, *knowing* these facts, to take the initiative? Perhaps we *would*, were we to keep constantly in mind the parable of the meek and Lowly One who said: "Whoso shall cause one of these little ones to stumble, * * * it is profitable for him that a great millstone should be hanged about his neck and that he should be sunk in the depths of the sea."

The Nurse.*

By Dr. John Hill Tucker, Charlotte, N. C.

Young Ladies of the Graduating Class, Ladies and Gentlemen:

First, allow me to acknowledge my deep appreciation of the honor you have conferred upon me in inviting me to participate in this long-looked-for and triumphant hour

*Read before the graduating class of the Charlotte Sanatorium, November, 1912.

of your lives. An hour which marks the closing of your hospital training and the opening up of a broader field for your efforts which, in reality, should be as broad as life itself.

You are now entering a great profession which, in unselfish service to others, stands second to none. Let us, therefore, tonight briefly consider the profession of nursing from three distinct points of view:

First.—In its influence upon those who follow it as a profession.

Secondly.—In its influence upon the public.

Thirdly.—In its influence upon the medical profession.

Nursing is as old as the human family, or, I think we may say, as old as life itself, for even among the lower animals there is a disposition on the part of the strong to help the weak of their own specie However, a record of the development of modern nursing would be a record of love and kindness, from the beginning of man to the present hour; a record which often would raise nursing to real heroism. I have seen, in my own short professional career, two bright young women give up their lives in the honorable discharge of their duties to those ill of infectious diseases.

Yes, the trained nurse of today is like the trained physician: a development of present-day needs. The natural evolution of society.

Now-a-days when we hear so much about the woman in law, and the woman in medicine, and more about the woman in politics, and the timid members of these respective guilds are heard to whisper fears of the over crowding and lowering of the dignity of these professions and womanhood, to the lasting detriment of both sexes. It is positively refreshing to turn from such fears and discussions tonight and consider anew the woman in her ideal sphere as a trained nurse. For where, on this earth, is a woman more lovely and queenly than standing as a guardian of lives entrusted to her gentle watching and care, either in her own or some one else's home.

At all events, we may rest assured of the fact that the active opposition to woman's attempt to widen her sphere of life and work has ceased, and it is only left with woman to decide what she deems is her work in life. It matters not what certain individuals may do, the great and lasting influence of woman must be wrought in the home. Far more does the future of this nation depends upon the kind of homes and healthful surroundings the children are reared in than it does upon those who were elected President, Governor or Senator in the recent political contest. It is of lasting and vital importance to all the future, the kind of homes our children are living in today. On the other hand, it is of but little consequence and passing interest who is President or Governor today, for if they prove unworthy of the office we can rid ourselves of them and forget their works. Not so with the body and soul which, if started the wrong way on life's journey, are not apt to change; and we must always remember the little ones of today will own and rule the world of tomorrow.

What better training could woman be given to fill her exalted position and to do her special work in this life than a training in a modern hospital, for the profession you have chosen to follow?

Your training has taught you to keep the strong in their full strength and how to lessen the burdens and the sorrows of the sick and weak. Can you imagine any ambition prompted by aught else than selfishness and vanity which would make the heart of the true woman happier than the knowledge of the fact that she is well trained to do her part in making the world purer, cleaner and a better place in which to live? For such reasons are many of the noblest women drawn into your ranks, and it is your duty and mine to see that only the worthy are permitted to become trained nurses.

Your profession stands second only to the medical profession as the teachers of the public in sanitary matters and hygienic rules of right living. In fact, in many instances your influence is of a more far-reaching and impressive nature than that of the doctor. It matters but little to the suffering individual how great is the physician's knowledge of the science and nature of the disease of which he is the sufferer, if this knowledge is not practically applied in his case. Therefore of greater importance to him is the trained eye and hand of the nurse who is with him and helps him by night and day to bear the pain and fever and nurses him back to life and health. Beautifully has it been said of your profession, "Your ears should be trained to know the dignity of moans and coughs and stifled cries. Your eyes should behold intelligently and pityingly the shriveled skin of emaciation, the hungry look and suppressed tear. Your hand should feel the pulse of him stricken in the lowly dwelling and that of society besides." Yes, your influence upon the State, through your service to the individual sufferer may be, and often will be, greater than your modesty would allow you to admit. Your gentle administrations will often touch and redeem the brutal and despised natures of this earth. Through your knowledge and advice many infant lives

will be saved, by teaching mothers how to properly clothe and feed their little ones. In short, tonight, as you accept your diplomas, which attest to the world that you have faithfully and successfully fulfilled all the requirements of the course and training in a modern hospital, the world has a right to place upon you a great responsibility. In the future you will, in whatever condition of life you are called, be looked up to for advice and assistance in times of sickness and distress. You will often have to help the weak and instruct the ignorant. It is a part of your obligations to man which you assume with your diplomas to lessen, as far as you are able, by word and precept the spread of preventable diseases. Tonight you share with the medical profession the sacred duty and blessed privilege of trying to stamp from the face of the living earth such common and dread diseases as tuberculosis. See what a great physician has only recently written along this line, and what an enviable part the nurse, as a teacher, is destined to play in the struggle of the races to throw off the Great White Plague:

"In its most important aspects the problem of tuberculosis is a home problem. In an immense proportion of all cases the scene of the drama is the home. On its stage the acts are played, whether to the happy issue of a recovery or to the dark ending of a tragedy so common-place as to have dulled our appreciation of its magnitude.

In more than 400 homes of this country there are lamentations and woe tonight—husbands for their wives, wives for their husbands; parents for their children, children for their parents. A mere repetition of yesterday's calamities, and if the ears of your hearts are open you can hear, as I speak, the beating of the wings of the angels of death hastening to the four hundred appointed for tomorrow. That this appalling sacrifice of life is, in a large part, unnecessary, that it can be diminished; that there is hope for the poor consumptive, this represents a revulsion of feeling from an attitude of oriental fatalism which is a triumph of modern medicine."

Your profession offers to woman the greatest opportunity for work in this world. Perhaps, with more truth than the writer of some years ago realized was the statement of a learned physician of the new world:

"There will be many trained nurses in the years to come who will live and work for humanity's sake; as centuries ago they claimed to be serving God when a young woman would bury herself in a convent, driven from the face of the living earth by misunderstood and unsatisfied longings."

Today has realized these predictions of many years ago.

The last phase of our thought is the relations that should exist between the nurse and physician. In many instances the medical profession has been wise and fortunate enough to make that relation, I trust, a most cordial one, but, in any event, one of man and wife. The relations that should exist between nurses and doctors should be one of mutual trust and confidence. With the splendid and intelligent class of women who are becoming nurses, there should be a partnership in their efforts to care for the sick and to lessen disease. To treat successfully a case, every wise physician is made to realize that quite half of the fight, if not more, in caring for the sick, is in the nursing. It is the physician's place to keep fully abreast of the marvelous strides medicine and surgery are weekly making, and from his constantly increasing knowledge, to guide and direct the course of treatment. It is the trained nurse's place to see that this knowledge and treatment is given her patient. With the right kind of doctors and nurses, there will be no friction. They both must learn from wise experience that where the doctor's duty to his patient ends, the nurse's duty really begins.

It is of the greatest importance to the welfare of the public that intelligent, industrious and honest men and women go into each of these great professions, for only by the cordial co-operation of these two professions can the highest attainments in medicine and surgery be made possible.

The nurse has come to fill a long-felt need in the medical man's life and is today his best asset, for the doctor of twenty years ago was both doctor and nurse. His life was a hard one and in many instances resulted in an early breakdown in health. He found but little time for reading and studying, which perhaps made the cynical Osler write,—

"It is astonishing with how little reading a doctor may practice, but it is not astonishing how badly he may do it."

Now, in conclusion, young ladies, allow me to assure you the medical profession is beginning to fully appreciate what you mean to them. They also realize your duties are often arduous and unappreciated, but time will prove to you and the world that the profession of nursing the sick is the most Christ-like and beneficient of all the callings represented in the great temple of our Christian civilization. When you are tired and discouraged by your labors, remember the words of Victor Hugo:

"Courage for the great sorrows of life and patience for the small ones, and when you have laboriously accomplished your daily task go to sleep in peace. God is awake."

The Affinity Between Functional and Nutritional Diseases.

By J. Cheston King, A.B., M.D., Atlanta, Ga., Proprietor of Howell Park Sanatorium, and Professor Nervous Diseases in Southern College of Medicine and Surgery.

Mental and nervous work does not increase bodily waste. In this it differs radically from physical work. But it cannot be done and done well unless nutrition and especially nutrition of the nervous tissues is good. Among cases often classed as functional diseases of the spinal cord are some in which objective symptoms of deranged function, slight in degree but definite in character, persist for months and years. They commence chiefly in those in the early and middle period of adult life, and are more common in women than in men. Such symptoms are inability to walk more than a short distance, without fatigue, impaired nutrition of the legs, slight increase of myolatic irritability, often associated with pains in the back, aching in the legs, and various spontaneous sensations of tingling, pins and needles and the like. There is often aching in the legs at night, especially when the patient lies on the back, and hence probably due to passive accumulation of blood in the spinal vessels. Such symptoms occur especially in those of neurotic disposition, who often present a distinct history of nutritional disorders and such nervous weakness that the diagnostician is satisfied with the term "Neurasthenia." In many cases, if the history of such symptoms is traced, they will be found to date from some definite exciting cause, from an attack of acute illness, such as typhoid fever or acute rheumatism, from pregnancy, a fall, over-exertion and the like, or to have come on during a period of general anæmia, anxiety, etc. Enfeeblement of the nervous system of results due to the impaired nutrition of the cord. We do know that nutritional changes are the underlying cause for asthenic muscular atrophy, and that alterations in spinal nutrition, in that disease are apparently the result of the impressions on the perepheral nerves.

There is no kind of food especially adapted to create nervous energy or to restore worn nervous tissue to a condition of vigor. It has been said, that as the brain was rich in phosphorus, a food containing it was best adapted to the need of brain workers. Experience has taught a different lesson. Intense nervous and mental work checks digestion, just as all emotions do. It is just as harmful to accomplish hard mental and nervous work immediately after a large meal as it is to do hard physical work. Indigestion and slow digestion always make mental work difficult; therefore the dietary for those who must do hard mental work must be determined by the digestibility of the food, rather than by its composition. As proteids of animal origin, are, as a rule, digested easily and quickly and readily utilized by the living tissues, they are well adapted to the needs of such persons. There is a dependence of nervous activity upon muscular activity. It is a fact, that there is no sharp line of demarcation between functional derangements and nutritional changes. No functional state can exist without leaving behind it some corresponding change in the finer molecular nutrition of the structures; and if functional derangement of lower structures results from that of the higher cerebral centers, and is maintained for long, the change in nutrition that results may be considerable and may be so definite as to persist even after its cause has ceased to act. Moreover, the general enfeeblement of defective nutrition of nerve elements is a potent cause of functional disturbance and at once facilitates and augments such effects. In every case of hysteria and neurasthenia that is persistent we find malnutrition, a lessened or capricious appetite, together with slow and painful digestion. The physician's first duty, when consulted in cases of this kind, is to see that loss of flesh and strength does not take place. Nothing is so conducive in restoring a neurasthenic to health as to place them where they are free from excitement and depression, and where a diet is furnished, easily assimilated, thereby gaining flesh and strength.

To accomplish complete relaxation the rest cure should be enforced, the patient removed from home, where friends and relatives are not allowed to see them for several weeks. The patient should be kept in bed at least six weeks and on a milk diet to begin with. Sometimes a patient does not like milk; in that case give one or two ounces every two hours. In two or three days increase the amount.

I have now, under treatment at my sanitarium, a young woman, a typical neurasthenic with dyspeptic symptoms. I put her on the rest cure with the following outline of diet: First day; one quart of milk, in divided doses every three hours. Second day; three quarts of milk, in divided doses every two hours. Third to sixth day; three and one-half quarts. Seventh, eighth, ninth ann tenth day; same diet. Eleventh day; dinner added and iron; this continued until nineteenth day. Then diet was as follows: 8:00 a. m., iron and malt. Breakfast consisting of a chop, bread and butter and a tumbler and a half of milk. 11:00 a. m., soup. 2:00 p. m., iron and malt. Dinner

of anything liked with six ounces of dry champagne, and at the end one or two tumblers of milk. 4:00 p. m., soup. 7:00 p. m., malt, iron, bread and butter, usually some fruit and two glasses of milk. 9:00 p. m., soup. 10:00 p. m., Lapactic pill. At 12:00, noon, massage for an hour. At 4:30 p. m., electricity.

At the end of sixth week soup and wine were dropped, iron lessened one-half; massage and electricity only on alternate days; one-thirtieth grain strychnine sulphate thrice a day. Ninth week, reduced to one quart.

The result up-to-date has been; She entered weighing 95 lbs., exaggerated reflexes, insomnia, and food not assimilating. Strange forebodings ever present. She now weighs 125 lbs., digestion perfect, endurance good, sleeps well, and frame of mind pleasant.

There are cases of sleeplessness that do not require dietetic treatment; there are others that can be cured by it. During sleep, glandular functions are less active than during waking hours. Indeed, sleep is usually not sound and is sometimes impossible until digestion is partly completed.

It is an undisputed fact that insomnia is very persistent and troublesome, when a good state of nutrition is not maintained. Malnutrition and an excitable nervous system makes many neurasthenics sleepless.

An interesting line of cases in which the dietetic and nervous symptoms are most manifest are the *neuralgias*. Many are due to faulty metabolism of asthetic diseases, gout, rheumatism, anæmia, diabetes, indigestion as to mental or physical strain. A proper diet is of much value in the treatment of such cases. For the gouty, anæmic and diabetic, the diet and mode of life appropriate to each must be prescribed. Neuralgias are often due to foul air, lack of sunshine, absence of any regular exercise. If such a patient is anæmic and persistently losing, a diet should be prescribed that will cause a gain in weight. Fats, butter, cream and oils are often required. Where there is much indigestion, a milk diet for two or three weeks will frequently correct it.

Sour stomach often results from the eating of sugar fats, rich gravies, sauces and is a common cause of frontal headache. As a rule, coffee and tea increase the tendency to acid fermentation and should be prohibited.

The intercostal neuralgias are almost uniformly due to flatulent indigestion, to constipation or both. Overeating, extreme weariness, any mental or nervous strain are frequently the cause of migrane.

In those diseases of the nervous system, such as hysteria, neurasthenia, insomnia, neuralgia and epilepsy, both the digestive and nervous system are so intimately interwoven that one cannot be treated to the exclusion of the other.

The provinces of medicine are often unproductive because the physician fails to recognize the intimate relationship that exists between certain diseases.

It would be amiss on my part not to make mention of the fact that the various drug habits, all to a degree, perhaps lesser or greater, bring about enfeeblement of the nervous system through impaired nutrition and increased myolatic irritability.

Foremost in the death dealing drugs as a habit is heroin. It produces a toxic neurasthenia, with over-stimulation and a flagging heart. It has been shown that the nucles of the neurones, which, in their normal condition are alkaline, become acid.

Patients who are in this drug habit have a lowered blood count and mal-assimilation of food. They are like a vessel in a black tempest, attacked on every side, but nowhere in particular. So, under the heading of drug habits, nervous and mental manifestations we have a long list of diseases showing the intimate relationship between nervous and nutritional disorders.

Treatment of Duodenal Ulcer.

The characteristic signs of duodenal ulcer are periodic attacks of severe pains ususually appearing three or four hours after a meal and not rarely at night. The pains are generally intense and last for hours as distinguished from the pains of simple hyperchlohydria, where relief can be much more readily obtained. The patients nsusually lose rapidly in weight so that a new growth may be suspected. Other symptoms are of less importance except an intermittent motor insufficiency of the stomach of marked degree during the period of the pains. Conditions which may stimulate the symptom complex of duodenal ulcer are gastric ulcer, cholecystitis, gastric crisis and gastric neuresthenia with hyperacidity. In every case, internal treatment should first be tried. The patient must remain in bed for several weeks with hot applications on the abdomen and should live on milk, cream, thick gruels with the addition of butter and yolk of egg, raw eggs with sugar, rice, farina, etc. Where internal treatment does not bring about a cure, an operation should be advised. The transverse resection of the ulcer is always preferable to gastroenterostomy.—Therap. d. Gegenwart.

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CHARLOTTE, N. C.

A "LEVULOSE" GLANCE AT EUGENICS.

With the first thought comes the question of our responsibility to humanity, not only to mutual benefit and uplifting of mankind, but how far we may carry the breeding of a people without infringing, or one may say, outraging, the inherent moral rights that were born with us:—that of individual selection of the partner in life, of personal preference as to compatibility and trend of thought, and of animal magnetism. The first and third of these, might in a sense, be grouped, but the second grouped with the third (where it rightfully belongs) opens a vista of thought too broad and too high to be plainly comprehensible and too elusive of analysis to be understood, much less explained.

We have some mental capacities which have lifted us above a mere animal life, yet which has not and cannot exclude the animal tendencies; stronger in some races and individuals than in others, but common to all, without which life would, to the majority, not only be colorless, but would also soon cease to be altogether. This argument may not appeal to the over-asthetic or to the aged whose memory is short. These animal tendencies, largely subservient, though never subdued by mental processes, abetted as they have always been by cunning and the caprice of will, have done more to uplift humanity than the laws of man, and have more moulded the destinies of nations than the weight of armies. Therefore in the off-hand solving of the problem, in all its complexity, that some find it easy to offer, the fact must not be ignored that these two human qualifications that some power has given us can never be separated, but must ever go hand in hand; and to force separation by a system of laws would not alone bring about a condition of martyrdom, the like of which, that suffered by the early christians were as mere pleasantries, but would usher in a condition of moral chaos that the greatest of minds could grasp with difficulty; the result of which would fill our asylums, and economics would be the problem of the day.

It is, therefore, a process of generations of education and of mental discipline that will place physical qualifications above social cast and intellectual development, which recognizes neither race nor degree bring us to the door of this Eugenic Arcadig that is, at this age, a Fairy's shadow.

F. N. B.

The recent demonstration by Gruber and Refferschied of the specific toxin which produces the symptoms of the toxemia of pregnancy is the first real forward step in the conquest of that unpleasantly frequent condition. These gentlemen have demonstrated an ether soluble substance derived from the blood of pregnant animals by extraction with ether. It is not precipitated by alcohol, and not destroyed by boiling. Injections of insignificant amounts of this ether soluble extract into non-pregnant rabbits usually caused death in convulsions and paralysis. The normal pregnant rabbit was nearly or entirely immune. Similarly prepared extract from the blood of non-pregnant animals was entirely innocuous.

In view of these discoveries it would seem that it should be possible to discover the chemical properties of this body and to trace it to its origin. It should be possible to isolate those bodies in the blood of normal pregnant animals which act as anti-toxins to this agent. Further investigations along these lines are highly desirable. Might it not be possible to extract the anti toxic principle from pregnant animals and use it as a therapeutic agent in the various phases of toxemia in the pregnant woman.

In the meantime it is rather interesting to note in this connection that the therapeutic use of the blood serum of normal pregnant women has been tried successfully in the treatment of the vomiting of pregnancy.

Along this same line it might be suggested that the various toxic symptoms of pregnancy, ranging from morning sickness to eclampsia are manifestations of intoxication by one and the same agent, differing only in degree; the severer cases depending upon failure of the body to produce the necessary anti-toxic substances in sufficient quantities and the violence of the symptoms depending on the amount of the unneutralized toxin remaining in the circulation.

The influence of the liver in the production of these anti-toxins or in the destruction of the toxins themselves should be closely investigated. Under the circumstances it would seem that the liver does not directly destroy the toxic agent, though it apparently has been shown to suffer most severely in cases in which this toxin circulates incompletely neutralized or undestroyed.—Reference: Deutsche medizinische Wochenschrift, August 8, 1912.

THE NEWSPAPERS AND PUBLIC HEALTH EDUCATION.

One of the most valuable of the many

things the North Carolina State Board of Health is now doing to promote the public health interests in this State is the furnishing to the press, both dailies as well as weeklies, a series of short pithy articles, many of them paragraphs of only a few lines, on various matters relating to disease and its prevention.

Beginning this service a few months ago, it met with such favor by the leading dailies of the State, that at their request the weekly sending was changed to a daily service. In this way the people are each day presented with matter dealing intelligently and truthfully with health and disease, in striking contrast to the material daily poured in quantity into the homes of the people through the medium of the quack medicine advertisements. The State Board is to be commended for this move, and as well the newspapers of the State deserve the thanks of the profession and people for availing themselves of the opportunity afforded for securing, without effort on their part, of health articles which will interest and instruct without inculcating the thought that certain quack medicines should be used as is usually the ultimate end of much of the medical articles published in lay periodicals.

THE EPILEPTIC SEIZURE—AN OLD THEORY.

It would seem that inasmuch as the pathologist has failed thus far to demonstrate a *causa efficiens* in the brain of the epileptic, the theorist may well hesitate. However, a consideration of the actual seizure leads the physician back to some interesting observations.

Is the seizure proper inherent in and limited in its origin to nerve tissue? Or are other tissues and other systems involved?

In the first place, let us recall the relation of intracranial pressure to certain other convulsions, especially of the clonic type.

And then let us consider the possibilities which local vasomotor disturbances offer.

Is syncope (fainting) a phenomenon inherent and confined to the brain substance? No, there is supposed to be a sudden anemia of the brain in many of these cases.

Henle in 1840 discovered the existence of muscle fibers in arteries and finally concluded that "the movement of the blood depends upon the heart, but its distribution depends upon the blood vessels." To Brown-Sequard do we owe our first accurate account of vaso-motor changes.

Briefly, we have learned that as a result of local vaso-constriction, we may observe both normal phenomena as paling in fear or nausea and syncope, etc., as well as pathological phenomena as certain ischemias of hysteria and angiospasms of Raynaud's disease.

Upon the other hand, as a result of local vaso-dilation, we may observe the normal phenomena of blushing, flushings in Graves' disease and erection of the clitoris, nipple and penis. The attacks of erythromelalgia are doubtless a form of vaso-dilation.

Older writers have testified that fits of epilepsy are immediately preceded by visible throbbing of the carotids and that determination of blood is the proximate cause of the paroxysm. Apparently the venous sinuses were unable to carry away the blood rapidly enough and a great pressure upon the surface of the cerebrum was the result.

The writer has observed a marked ophthalmus in one patient preceding the attack and has been inclined to attribute it to an increased intracranial pressure.

Physiologists have been loath to recognize the possible existence of an innervation of the meningeal arteries, though the carotids are thus supplied. We can hardly agree with the dictum of Monro that the "quantity of blood in the cranium is almost invariable inasmuch as being enclosed in a case of bone, the blood must be continually flowing out of the veins that room may be given to the blood which is entering the arteries,—as the substance of the brain like other solids of the body is nearly incompressible," because of our knowledge of the variations in the cerebro-spinal fluid if for no other reason. No nerve fibers have been demonstrated in the cerebral vessels, but the question cannot thus be dismissed because of the possible role taken by those vessels entering the cranium. We must also treasure in mind, certain relations between the splanchnic and intracranial vessels. Thus following section of the splanchnic nerves, a rabbit may bleed to death into its abdominal vessels, all blood being drained from the brain.

In 1843, C. J. B. Williams in his extraordinary work on "Principles of Medicine and Pathology," referring to the determination of blood in the epileptic seizure, pointed out that pressure on the pulsating carotids had been known to prevent these fits. In reviewing his book, one is convinced that either he was not informed as to the remarkable researches of Henle, three years before, or that he doubted their importance.

At this point, it will be necessary to go back a bit further and to digress somewhat from the disease, epilepsy. The Medico-Chirurgical Review of London, comments that in 1837, Dr. Allier, through a report in the *Clinique des Hopitaux des Enfans*, discusses the treatment of the fits of hydrophobia by compression of the carotids. Although our evidence that determination of

blood plays a lesser part here makes us cautious, his conclusions as to the harmful effect of the convulsion is interesting, and had best be quoted: forcibly effected by the total impotence of drugs here, he used the method apparently with some success. He concludes, "It is true that by the employment of this measure, you do not attack the evil at its source, you do not destroy the intoxication, but—the deadly effects of this poison, namely, the convulsions, might be prevented. These convulsions are the cause of death either by asphyxia or by exhaustion of the nervous system."

And now as to the epileptic seizure. These theories, though beautiful, are only theories, though no more so than the usual theory proposed that the seizure is the result of an intoxication. Surely the older conception stands upon a no less stable foundation than the present day conception. At least it offers an opportunity for investigation, especially by the practitioner, even though he may not be a skilled chemist.

Bear in mind that if we should be able to prevent the seizure in epilepsy, the primary etiology and pathology of the disease might wait.

The writer would hesitate to recommend digital pressure of the carotids (save perhaps by the patient providing he have sufficient warning of the onset of the fit.)

There should be better methods of controlment of the cranial blood supply, and the subject is worthy of investigation.

THE GYNECOCCUS.

The gynecoccus, sometimes called the gonococcus, presents a rather peculiar and interesting life cycle.

Many of the diseases caused by this germ are grouped under one heading; and to them the term gynecology has been applied.

The gynecoccus, similar to the plasmodium, is a remarkable traveler. Today it may be lodged in our city's finest mansion; tonight it may go slumming and tomorrow it may wind up in the hospital.

The plasmodium is spread by the *anopheles punctipennis* but the gynecoccus, by the *homo punctipennis*. Both of these creatures fly by night. The "sting" is the chief source of the danger. Remove this and either becomes as harmless as a lamb.

The gynecoccus has broken more women's hearts and more men's bank accounts than any other one germ. Incidentally it has brought considerable money to physicians.

Although this micro-organism wrecks chief havoc among our women and our children, the active carriers of the germ are not immune to its bad effects.

Just at present the gynecoccus is not in public favor. In a few short years it will find life almost as dull as its friend, the treponema pallidum.

MADE IN THE UNITED STATES.

Germans are taught to advertise. How well they have done this, we all know. Even our own citizens grab at the "Made In Germany" whether it appear upon a hundred dollar lens or upon a five cent toy. It is said that certain American concerns permit the free use of such stamps in various departments.

In America, medical professors are known as "Doc Smith" and "Old Hurley." Across the water they are known as "The Great Professor Schultz" and "The Most Honored and Learned Von Amberg." Consequently there is a feeling among us that perhaps after all, the German professors are greater men than those who sit in the chairs of our universities. This is not true.

It is high time we were advertising.

What have we to advertise?

After the names of Osler, Cabot, Vaughan, Mayo, Hare, Barker, Dock and Gorgas, the average practitioner would hesitate. Shame!

Who is the world's greatest anatomist today? Professor J. P. McMurrich of the University of Toronto undoubtedly deserves this title. Canadian, you ask? No, like Osler he is one of our own United States, and another country, realizing his worth, has taken him up.

Who is the world's greatest experimental pharmacologist today? Perhaps there is more room for opinion in this case. But we must not lose sight of the great Cushny, now of London, but formerly of this country.

Then there is Mall, the embryologist at Hopkins; Howell, the physiologist at the same school, and Cannon, the physiologist at Harvard.

There is but little need to mention the name of the great Victor C. Vaughan, of Ann Arbor, American father of biological chemistry, or of his colleague, F. G. Novy, who has done so much for practical bacteriology.

Even as Virchow and Cohnheim of the old world were the fathers of pathology, so are Warthin and Adami of the new, the foster fathers.

It is these men and many other such as they who have little chance to shine in the spectacular things rather than those who race with death across the continent, on special trains because none were near who could have done as well as they—it is the men who work day after day, year after year, in some laboratory, unknown and unnoticed, to whom the world of tomorrow will erect monuments.

Many of our men need no advertising, and concerning these too much has already been said (especially in the daily papers by their press agents).

Yes, it pays to advertise, but let us call the attention of the world to our very best. Press agents will die, and unless there is a real record of worth to leave behind those who are thus advertised, the world will snicker at our pains.

Editorial News Items.

The 15th annual session of the Tri-State Medical Association will be held at Norfolk, Va., February 19th and 20th, 1913. The prospects are for a big session; the preliminary program is an unusually interesting one. Those intending reading papers will please send title to the secretary (Dr. R. E. Hughes, Laurens, S. C.,) at once.

The Monticelle Hotel will be headquarters —with a convention hall in the building.

Virginia hospitality as usual will be dispensed *ad libitum*. An oyster supper at Cape Henry and an entertainment at the Country Club one night.

The local committee of arrangements consists of Dr. Southgate Leigh as chairman, and Drs. J. F. Woodard, W. E. Driver, Geo. E. Chinn, R. L. Payne, Jr., and James H. Culpepper.

Mr. Joseph Howell Way, Jr., eldest son of Dr. J Howell Way, of Waynesville, N. C. was married to Miss Marguerite Slone on December the 18th.

Dr. E. H. Terrell, of Richmond, Va., announces that after January 1, 1913, his practice will be limited to diseases of the restum and colon.

BOOK NOTICES.

A Practical Study of Malaria. By William H. Deaderick, M.D., Member American Society of Tropical Medicine; Fellow London Society of Tropical Medicine and Hygiene. Octavo of 402 pages: illustrated. Philadelphia and London, W. B. Saunders Company, 1909. Cloth, $4.50 net; half morocco, $6.00 net.

This work of some 400 pages is devoted entirely to a comprehensive view of malaria, in all its phases, but is essentially practical and devoted to the needs of the general practitioner. It should be in the hands of all physicians who practice in malarial districts at least. The history and geographical distribution of the disease are first given in detail, followed by a thorough discussion of the parasite and the role of the mosquito. The description of the parthogenetic cycle is of special interest as the only rational explanation of latency and relapse, and marking the first appearance of this explanation in the English language.

A Manual of Diseases of the Nose, Throat and Ear. By E. Baldwin Gleason, M.D., Professor at Otology at the Medico-Chirurgical College, Philadelphia. Second revised edition. 12mo. of 563 pages, profusely illustrated. Philadelphia and London: W. B. Saunders Co., 1912. Flexible leather, $2.50 net.

This is a concise, practical and up-to-date text-book of nearly six hundred pages, bound in soft leather, of convenient size, having good type, and paper, and is profusely illustrated, This second edition has been carefully revised and many chapters entirely rewritten to conform to modern knowledge concerning a branch of medicine that has made wonderful advancement during the past few years. The work is very comprehensive, considering size, and it has been written in that clear and forceful manner characteristic of the experienced teacher and clinician. It is so uniformly excellent throughout that it will appeal to those who desire a condensed though thoroughly practical treatise on diseases of the nose, throat and ear, and one of convenient size.

Dyspepsia: Its Varieties and Treatment. By W. Soltau Fenwick, M.D., (London), Doctor of Medicine of the University of Strassburg. Octavo of 485 pages, illustrated. W. B. Saunders Company, Philadelphia, 1912. Cloth, $3.00 net.

The almost universal conception of dyspepsia is that the condition is due to some substantiative disease dependent upon a primary failure of the gastric functions.

We are not aware of any book in the English langdage that so effectually corrects this misconception or one which so properly emphasizes that in a large proportion of cases, the symptoms of dyspepsia result from the failure of some other and perhaps remotely situated organ of the body, to execute its proper functions.

The vplume is divided into ten chapters and an enumeration of the headings will best give an idea of the scope of the work: the varieties of dyspepsia and their differential diagnosis; dyspepsia due to abnormalities of secretions; dyspepsia duê to failure of the muscular power of the stomach; dyspepsia due to disturbances of the stomach; dyspepsia due to inflammations of the stomach; dyspepsia due to the presence of foreign bodies and living creatures in the

stomach; dyspepsia in infancy and old age; dyspepsia dependent upon diseases of other organs; intestinal indigestion.

A rather exhaustive bibliography and a complete index complete the volume.

Collected Papers by the Staff of St. Mary's Hospital, Rochester, Minn., 1905-1909. Philadelphia and London: W. B. Saunders Co. 1912: Cloth, $5.50 net.

Admirers of the work done at the St. Mary's Hospital Clinic at Rochester, Minn., by the Mayo Brothers and the Hospital Staff, will no doubt welcome the advent of this book, and be pleased to know that such a la ge number of papers from this widely known clinic have been indexed, bound and presented to the profession in accessible form and at nominal price.

Seventy-three valuable papers, many of them beautifully illustrated, grouped into one volume, make that volume unique. It is not a text-book. It treats no particular subject, but gives the advanced opinions of the individual writers on the subject presented, at the time the papers appeared.

All classes of cases treated at the Mayo Clinic are represented in this work, that includes pretty nearly everything afflicting the human being, either in the head, chest, abdomen, pelvis, arms, legs, hands or feet.

It is impossible for all to visit Rochester every year. It is impossible for some to go at all, but each and all may, if he or they choose, to a large degree, bring the clinic to his own office by this means.

A System of Surgery. Edited by C. C. Choyce, B.Sc., M.D., F.R.C S., Dean of, and Teacher of Operative Surgery in,the London School of Clinical Medicine (Post-Graduate); Assistant Surgeon to the Seamen's Hospital, Greenwich; Surgeon to Out-Patients at the Great Worthem Central Hospital. Pathological Editor, J. Martin Beattie, M.A., M.D., C.M., Professor of Pathology and Bacteriology, and Dean of the Faculty of Medicine, in the University of Sheffield; Hon. Pathologist to the Sheffield Royal Infirmary and Royal Hospital. In three volumes. New York: Funk & Wagnalls Company. 1912.

This work is intended for the surgeon who desires to keep himself abreast of the most modern teaching, and for the senior student who aims at a sound and comprehensive knowledge of present-day surgery.

Volume I is devoted chiefly to the consideration of Surgical Pathology and General Surgery, while volumes II and III are mainly occupied with a systematic description of the surgical diseases of the various organs and regions, by authors whose special knowledge and experience entitle them to write with authority.

In several instances a full description of the operations of Surgery is not given and the reader is referred for further details to works on Operative Surgery, such as that of Treves and Hutchinson.

These volumes contain hundreds of very fine illustrations, and colored plates. The books are large, containing about 900 pages each. They are well bound, and will be found of real value to the surgeon.

International Clinics. Edited by Henry W. Cattell, A.M , M.D., Philadelphia, U S. A., with the collaboration of John A. Witherspoon, M.D., Nashville, Tenn.; Sir Wm. Osler, M.D., Oxford; A. McPhedran, M.D., Toronto; Frank Billings, M.D., Chicago; Chas. H. Mayo, M.D., Rochester; Thos, H. Rotch, M.D., Boston; John G. Clark M.D,, Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantyne, M.D., Edinburgh; John Harold, M.D., London; Richard Kretz, M.D., Vienna. Volume IV. Twenty-second Series, 1912. Philadelphia and London: J. B. Lippincott Co. Price $2.00.

This volume contains articles on Treatment, Medicine, Surgery, Neurology, Pædiatrics, Obstetrics, Gynæcology, Orthopædics, Pathology, Dermatology, Ophthalmology, Otology, Rhinology, Laryngology, Hygiene, and other Topics of Interest to students and practitioners.

The volume is substantially bound, and carefully indexed.

New Aspects of Diabetes. Pathology and Treatment. By Prof. Dr. Carl von Noorden, Professor of the First Medical Clinic, Vienna. 8vo, 160 pages, diagrams and tables, $1.50 prepaid. E. B. Treat & Co., Medical Publishers, 241-243 West 23d Street, New York.

This volume embraces the series of lectures on diabetes recently delivered before the New York Post-Graduate Medical School, also the lectures delivered in St. Louis, Los Angeles, San Francisco, Baltimore and other American cities, and is issued immediately at the close of the New York lectures. (November, 1912.)

Outline of Lectures.

I.—The Source of Sugar—Carbohydrates, Proteids, Fats, Summary.

II.—The Rise in Caloric Production and Its Causes.

III.—The Control of Sugar Formation and Its Disturbances. Theories of Diabetes. The Liver as the Place of Control, The Influence of other Organs on the Liver, The Diabetic Hyperirritation of the

Sugar forming Apparatus, Is Diabetes a Single Morbid Entity?

IV.—Therapy of Diabetes—Introduction, What is the Object of Carbohydrate Restriction? Principles of Treatment in Slight Cases, Principles of Treatment in Transitional Cases, Principles of Treatment in Severe Cases, Tolerance Determinations, Carbohydrate (Oat) Cure, Therapy of Acidosis, Drugs, Concluding Remarks.

Acetonuria, its Influence on the Treatment of Diabetes Mellitus.

I.—Slight Glycosuria—Cases in which Carbohydrates Had Been Freely Used, Cases in which Carbohydrates Had Been Disused.

II.—Severe Forms of Glycosuria—Most Severe Cases, The Really Severe Forms of Glycosuria.

III.—Special Indications—Alkaline Therapy, Feeding.

Outlines of Physiology. By Edward Groves Jones, A.B., M.D., Professor of Surgery in Atlanta School of Medicine, and Allen H. Bunce, A.B., M.D., Associate Professor of Physiology in the Atlanta School of Medicine. Third Edition, Revised. 111 Illustrations. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1912. Price $1.50.

In revising this work the author's aim has been to fulfill the original purpose of the book in so far as possible. The volume has been prepared with a view of presenting, in as convenient form as possible, the essential facts of modern physiology as related to the practice of medicine.

Much of the original manuscript has been entirely re-written, and many new illustrations have been added. A maximum of space has been given to those subjects which seem of most practical importance.

The volume is neatly and attractively bound, and the illustrations are up-to-dote in every sense.

The Practical Medicine Series, Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School; Charles L. Mix, M.D., Professor of Physical Diagnosis in the North-western University Medical School. Volume IX. Skin and Venereal Diseases. Miscellaneous Topics. Edited by W. L. Baum, M.D.; Harold N. Moyer, M.D. Series 1912. Chicago: The Year Book Publishers, 180 N. Dearborn St.

The contents of this volume are divided into three heads, namely: Skin and Venereal Diseases; Genito Urinary Medicine and Surgery; Miscellaneous.

This volume is very similar to the one published on the same subject about a year ago. Some changes have been made in the text however, and this edition seems to be quite complete and up to-date. Like the former volumes of this series, it is nicely bound and carefully indexed.

Building a Profitable Practice. Being a Text-Book on Medical Economics. By Thomas F. Reilly, M.S., M.D., Professor of Applied Therapeutics, Medical Department Fordham University, New York City. Philadelphia and London: J. B. Lippincott Co.

At the beginning of a medical career, many great problems face the young doctor. Students have been drilled in the science and art of medicine, and it is the purpose of this volume to correlate what has gone before with the usage of the profession, and to teach the business principles underlying the successful practice of medicine.

This is one of the most complete and helpful volumes that we could recommend to inexperienced practitioners. It gives in detail chapters on the following subjects: The Economics of Medicine; Post-Graduate Study; The Hospital and Dispensary Service; State Board Examinations and Licenses; Location; The Office; Extra-Practice Sources of Income; The Start in Practice; Medical Societies; The Office Call; First Visit; Medical Finance; Collections; Bookkeeping; The Law and the Doctor; Professional Ethics; Advertising, Etc.; Commissions; Consultation and Consultant; Certificates; Prognosis; Diagnosis; Errors in Practice; Dispensary; Religious Rites, Etc.; Obstetric Cases and Emergencies; Abortion; The Doctor as a Specialist; Automobile vs. Horse and Carriage; On Drugs and the Pharmacist; Building up an Office Practice; Aids in Practice; On Making Friends; Personal Manners; Personal Appearance; Marriage; Dont's in Practice; Answers to Patients; Your Life Work.

The volume is substantially bound and carefully indexed. Its illustrations are very fine and quite numerous.

Fatigue and Efficiency. By Josephine Goldmark, Publication Secretary, National Consumers' League. 8vo. 358 yages. Postpaid, $2.00. Charities Publication Committee, 105 East 22d Street, New York.

No lawyer called upon hereafter to advise his business clients about their duty in the matter of obedience to laws regulating the hours of labor should give such advice

until he has read this discussion of the physiological and economic effects of fatigue on working people. No State's attorney called upon to defend such a statute can do without it. If judges will read it they will find that it throws more light on this exercise of the police power than anything in the law books. If stockholders and directors will read it their inclination to oppose such legislation, either before or after its enactment, will take wings. If social reformers will read it they will surely be strengthened in their purposes. If workingmen and working women and the parents of working children will read it, and take its lessons to heart, it may not matter so much whether the others read it or not. —Edward T. Devine. The Survey, May 4, 1912.

We quote this from "The Survey" because it expresses so fully our own ideas of this timely volume.

We take great pleasure in recommending this work to our readers.

The book is nicely bound, and is up-to-date in every respect.

The Psychology of Insanity. By Bernard Hart, M.D., (Lond.), Lecturer in Psychiatry University Medical School; Medical Superintendent Northumberland House Asylum. Cambridge: At the University Press. New York: G. P. Putnam's Sons. 1912.

An endeavor has been made to develop the subject-matter of the book in a systematic manner, so that the general principles which it is sought to establish may appear in as clear a light as possible.

No attempt has been made in this small volume to cover the whole field of insanity, but certain branches of insanity have been selected and thoroughly discussed.

The volume contains 172 pages of reading matter and is well bound.

Food in Health and Disease. By Nathan S. Davis, Jr., A.M., M.D., Professor of the Principles and Practice of Medicine in Northwestern University Medical School; Physician to St. Luke's Hospital, Mercy Hospital and Wesley Hospital, Chicago; Member American Medical Association, American Clinicotological Society, Etc. Second Rdition. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut St. 1912. Price $3.50.

This work is divided into two parts. The first part is devoted to "Diet in Health" with chapters entitled as follows: Food in Health; The Uses of Water; The Elements of Food: Quantity and Kinds of Food Needed in Health; Animal Foods; Vegetable Foods; Beverages; Diet in Health; Infant Feeding; Food as a Cause of Disease. Part II. "Diet in Disease." Feeding the Sick; Diet in Infectious Diseases; Diet in Diseases of the Stomach; Diet in Diseases of the Intestines, Liver and Peritoneum; Diet in Diseases of the Respiratory Organs; Diet in Diseases of the Blood; Diet in Diseases of the Circulatory Organs; Diet in Diseases of the Kidneys; Diet in Diseases of the Nervous System; Diet in Diseases of the Skin; Diet in Disorders of Nutrition.

This volume appears quite complete. Symptoms of diseases are described whenever it seemed best to the author, in order to make clear the indications for dietetic and general hygienic treatment. We wish to call special attention to the numerous studies of food and dietetics prosecuted under the auspices of the United States Department of Agriculture, and under the supervision of Professor Atwater.

The volume is well bound, and carefully indexed, containing 449 pages of reading matter.

Psychanalysis: Its Theories and Practical Application. By A. A. Brill, Ph.B., M. D., Chief of the Neurological Department of the Bronx Hospital and Dispensary; Clinical Assistant in Psychiatry and Neurology at Columbia University Medical School. Octavo of 337 pages. Philadelphia and London: W. B. Saunders Company. 1912. Cloth, $3.00 net.

This volume contains twelve chapters entitled as follows: The Psychoneuroses; Dreams; The Actual Neuroses; The Compulsion Neuroses; Psychanalysis and the Psychoses; Psychological Mechanisms of Paranoia; Psychopathology of Every-Day Life; Hysterical Faucies and Dreamy States; The Oedipous Complex; The Only of Favorite Child in Adult Life; Anal Eroticism and Character; Frend's Theory of Wit.

This volume is full of valuable and interesting ideas for the medical profession to grasp. It is up-to-date in every respect, and we are glad of an opportunity to call the attention of our readers to this most valuable work on Psychanalysis.

Uncomplicated Pregnancy and Labor, Presenting a Simple Scientific Method of Treatment of the Disorders of the Pregnant Term, for their cure, and for the Prevention of the Complications of Labor to Induce a Normal Balance of all Functions, so that a Labor Without Pain in Very Large Part is the Result. By Finley Ellingwood, M.D., Chicago, Ill., author of "Ellingwood's Materia Medica and Pharmacognosy," "Ellingwood's Practice of Medicine," "A Synopsis of Medical Chemistry," "Manual of Urinalysis,"

and Editor of Ellingwood's Therapeutist. Published by "Ellingwood's Therapeutist," 32 North State Street, Chicago, Ill.

This little volume contains eight chapters entitled as follows: I, Motherhood; II, Causes; III, General Elimination; IV, Dieting, V, The Labor; VI, Summary, VII, Department of Therapeutics; VIII, Treatment.

This volume will be of special value to the laity as well as to the physician.

The author's object in this little book is to present the first lessons in the absolutely essential education of both the physician and the patient in the facts presented.

The book is neatly bound, and we take great pleasure in recommending it to our readers.

Second Annual Report of the State Charities Commission to the Honorable Charles S. Deneen, Governor of Illinois, Springfield, Ill., Dec. 31, 1911. Springfield, Ill.: Illinois State Journal Co., State Printers. 1912.

This volume shows that the State of Illinois is doing a most commendable work along charity lines. This report is quite complete and quite interesting.

This volume also contains reports of inspection of institutions during 1911. This volume is substantially bound and is very attractive in appearance

The Practical Medicine Series. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School; and Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume VII. Pediatrics. Edited by Isaac A. Abt, M.D., Professor of Pediatrics, Northwestern University Medical School, Attending Physician Michael Reese Hospital. With the collaboration of May Michael, M.D. Orthopedic Surgery. Edited by John Ridton, A.M., M.D., Professor of Orthopedic Surgery, Rush Medical College. With the collaboration of Charles A. Parker, M.D. Series 1912. Chicago: The Year Book Publishers, 180 N. Dearborn Street. Price $1.25.

This series was published primarily for the general practitioner. At the same time the arrangement in several volumes enables those interested in special subjects to buy only the parts they desire.

This volume contains 240 pages of carefully indexed reading matter and also several very fine illustrations. We are glad of the privilege to recommend this work to our readers.

Abstracts of the Leading articles of the month.

Paratyphoid Fever.

Hay (Liverpool Medico-Chirurgical Journal) remarks that paratyphoid fever was first described by Schottmuller in 1910, and since that time a large number of cases have been described by various observers. It is stated that probably about 3 per cent. of so called typhoids in London are really suffering from paratyphoid, and that in some parts of Germany and America the percentage is trebled. Many of the cases are clinically indistinguishable from a mild form of typhoid fever. There is pyrexia of one or two weeks' duration. The spleen is enlarged, and may be palpated and is harder than is the rule in typhoid fever. There are rose-red papules and distension of the abdomen. The patient is dull, and apathetic, and the tongue is furred. The onset may be insidious, or it may be abrupt and sudden, with some headache and muscular pains, vomiting and diarrhoea. A sore throat is not uncommon, and herpes facialis is a well recognized complication. Professor Lorrain Smith describes these irregular forms: (1) A pyaemic or septicemic type characterized by rigors and intermittent fever; (2) a gastro-intestinal type characterized by vomiting at the onset and severe diarrhoea, blood and mucus being passed: and (3) the ambulatory type. The diagnosis can be made with certainty by the isolation of the bacillus from the blood or faeces. Agglutination tests, when carefully carried out, may, however, yield valuable evidence, and afford reasonable justification for a positive diagnosis. The author reports three sporadic cases. The first began as an ordinary acute food-poisoning. There was temporary recovery, and then a serious and fatal relapse, characterized by symptoms differing markedly from those of the initial illness. The second case presented some of the features of enteric fever, but the clinical evidence was not sufficient to justify a positive diagnosis. The third case began suddenly with symptoms very characteristic of influenza. There was a transient recovery, followed by a tedious febrile illness.

From a review of these cases the author draws the following conclusions: (1) It is well to recognize that an appreciable percentage of the cases certified as typhoid fever are really suffering from a paratyphoid infection. The public health returns are to this extent incorrect; and as the death rate from paratyphoid is very low, the mortality returns for typhoid are falsified by the inclusion of the milder fever. (2) A nega-

tive Widal, which often gives a false sense of relief to doctor, nurse and relatives, does not exclude paratyphoid, which is an infectious fever, and must be carefully managed, in order to prevent spread of the infection, as in ordinary typhoid. (3) When the blood from a patient whose symptoms suggest a diagnosis of typhoid fever fails to agglutinate the Bacillus typhosus, further agglutination tests must bs carried out, or the stools must be examined for the Bacillus paratyphosus, and allied organisms. (4) Closely as paratyphoid fever simulates typhoid fever, a careful consideration of the clinical history will, in a number of cases, justify a provisional diagnosis of paratyphoid fever being made even before the specific tests are applied to the blood. (5) Of special importance in the diagnosis is the occasional acute onset, characterized by pyrexia, vomiting and diarrhoea, with severe pains in the head and back. Sore throat and herpes are frequently noted at an early date. These more acute symptoms may subside, but the pyrexia continues, and other signs and symptoms appear, which closely simulate typhoid fever, such as enlargement of the spleen, rash and abdominal distension. (6) Sometimes there is a transitory period of comparative improvement intervening between the first few days of acute discomfort and the rest of the illness. (7) The practical value of determining what organism is responsible for each case of gastro-intestinal infection is obvious, for when the organism is known the probable source of infection can, with some likelihood, be surmised, whether it be beef, pork, or a human carrier. A series of cases of anomalous typhoid should at once suggest the necessity for a careful examination of the blood or stools.—The Australasian Medical Gazette.

A Case of Heroin Habit.—Symes (Bristol Medico-Chirurgical Journal) states that a case has recently come under his care in which the patient was supplied by a medical man with a hypodermic syringe and some heroin hydrochloride tablets, to be used for the relief of pain, and was assured there was no danger of contracting a habit from its continued use. The patient, a woman 39 years of age, whilst staying at a well-known spa, was seized with neuritis in the right arm. As other remedies failed to give relief, the doctor gave a hypodermic injection of 1-12 grain heroin hydrochloride, and directed that the nurse should repeat the dose whenever the pain recurred. The first effect of the injection was to relieve the pain, but half an hour later vomiting commenced and continued during the night. This was late in 1906. As the pain continued, the injections were repeated, first by the doctor, then by the nurse, and later by a relative, and the dose was gradually increased to ¼ grain three or four times a day. During the next two years the patient made ineffectual attempts to break off the habit. In 1907 she learned to use the hypodermic syringe herself. From this time the habit gradually became more confirmed, and the dose increased, until at the time of her breakdown, in October, 1911, she was taking between four and five grains in the twenty-four hours. The daily allowance never exceeded five grains.

With regard to the effects of the drug, he describes some of these in the patient's own words, an observant woman of education and refinement. Even after the first dose there was "a feeling of excessive fidgetiness, which seemed to creep right up from the very lowest part of the body (the womb), making me so terribly restless that I could not keep my legs still for a moment. This particular feeling increased maddeningly until I had the injection again, when I felt immediately relieved and blissfully comfortable for about two and a half to three hours." It was the recurrence of these feelings which led to the repetition of the drug throughout. Gradually the patient's health began to fail; she became thinner, less able to take physical exertion, depressed and seedy. The appetite was very poor, and she noticed a peculiar salty taste in the mouth when the drug was withheld. Occasionally she had attacks of vomiting, and constipation was most troublesome. The catamenia became at first irregular and scanty, and finally ceased. She had never been a good sleeper, but since taking heroin this had become much worse, and she had recourse to drugs (chiefly veronal) to induce sleep. If the interval between the injections of heroin was too long, she "felt wretchedly fidgety and uncomfortable, and people and things seemed to go farther from me as I looked at them, and at times I felt almost light-headed." If the dose was increased too rapidly, it gave rise to palpitation and excitement. Amongst other symptoms noticed were increased sensibility to sounds and loss of recuperative power after small injuries, such as cuts; another most troublesome symptom was difficulty in starting micturition. There were never any symptoms of respiratory failure, oppression of breathing, etc. The patient says that whilst taking the drug (although previously extremely subject to colds) she never sneezed nor coughed, nor did she ever catch a cold during the whole five years.

Use of the Peritoneum.—Howell (British Medical Journal) says that the chief use of the peritoneum is in the nature of a scavenging organ; that its use is "that of a perienteric trap for the reception and annihilation of micro-organisms which constantly and normally—that is, without producing symptoms—permeate the intestinal wall." The writer says that it is part of the function of certain of the internal organs, chiefly the liver, stomach and intestines, to excrete the toxic products formed therein, including at times even the bacteria themselves. This is to be accomplished with the minimum risk of contamination to the remainder of the structures of the body.

He says his conception of the chief function of the peritoneum in great part upon its philogenesis, and cites a similar function as the chief in the lower forms of life. He cites clinical cases in which the peritoneum has been taking care of the excreted bacteria, as in the case of tubercle bacilli, for long periods of time without the presence of any symptoms and in which this fact has been discovered only by accident in the course of an operation for some other condition. The writer further says, in support of his contention, that the peritoneum is frequently—in fact, usually—called upon to care for a certain number of pathogenic bacteria as the result of many surgical procedures.

The histology of the structure bears out his views, as it consists of endothelial cells. The writer says that during life there is a progressive attenuation of the numbers of the bacilli which pass through the intestinal wall as the result of the sievelike action of the several structures encountered in their passage. When they reach the peritoneum they are relatively scant and are soon disposed of. When for any reason, however, the bacteria pass through in large numbers, symptoms are produced which are well known, such as those of peritoneal infection, etc. The toxines which are liberated in the peritoneal cavity through the destruction of large amounts of bacteria are normally excreted through the glands of Lieberkuhn.

In times of stress this function is also shared by the peptic glands, and this is especially true in those cases in which the function of the intestine is impaired by diminution in peristalsis or by its paralysis or when there is actual obstruction. Then the stomach becomes filled with the excreted toxic products of the peritoneum and also with the bile and toxines thrown out by the liver. This brings about vomiting.

He says these symptoms are nicely graded in severity so as to correspond to the gravity of the condition which causes them.

Suprarenal Gland Extract in Cardiac Dyspepsia and Cardiac Dropsy.—Voight (Calcutta Medical Journal) says that digitalis, strophanthus, convallaria, and caffeine are all useful in their turn; but sometimes one and all may fail us. There is no doubt that strychnine hypodermically is an invaluable remedy in failure of cardiac compensation; that the nitrites are of great service in some cases; that atropine subcutaneously relieves the dyspnea of others; that potassium iodide is to be despised as a heart tonic; and that the Nauheim bath treatment, judiciously applied and carefully supervised, does wonders in the early stages of compensation failure.

But there is another remedy which can be relied on in some cases. This is suprarenal gland—the solution of the extract of the gland used hypodermically or by intravenous injection, or the gland substance given by the mouth in tablet form.

The writer says that he has had under his care several cardiac cases in which dyspnea and dropsy were prominent symptoms, and in which suprarenal gland was administered. He gives a report from his notes on two of these cases only. In the others the action of the remedy in combating the symptoms was maintained. In all, more or less severe dyspnea was relieved, sometimes by the hypodermic injection of from 5 or 10 to 15 minims of the 1-in-1000 adrenalin solution, at other times by a 5-grain tablet of the suprarenal gland substance administered by the mouth. When the dyspnea was not very severe, the dose of adrenalin solution injected hypodermically was from 5 to 10 minims (1-in-1000 solution), and the 5-grain tablet of the gland substance was halved for each dose by the mouth. In general practice one cannot always make provision for the amount of urine passed by the patient in twenty-four hours to be accurately measured. But where he succeeded in making such provision while his patients were under treatment by hypodermic injections of adrenalin or by the tablets of suprarenal gland substance administered by the mouth, he almost invariably found the quantity of urine increased and the dropsy at least temporarily diminished by the treatment. Sometimes the apparent effect of the remedy in this respect was marked and striking.

Rare Symptoms in Chorea.—Westphal (Wien. med. Klin.) describes two cases of chorea minor which presented unusual symptoms, and which were also of interest because of the anatomical changes which underlay the clinical symptoms that were brought out by microscopical examination. The first case was of acute chorea minor in

a child of 12. The striking point was the absence of knee-jerks, which was verified by repeated examinations as the choreic movements diminished in severity; on one occasion the reflex was present, but feeble. A few days after admission the patient developed a loud, blowing systolic murmur at the apex and base, and there was irregular remittent fever up to 39.5° C. (103.1° F.); death occurred a fortnight after admission from heart weakness. At the autopsy small nodules were found on the mitral valve, and a few on the aortic valve. From particles of these nodules cultures were made, and colonies of hemolytic streptococcus developed. Guinea-pigs were injected subcutaneously with pure cultures of the streptococcus, but in only one case was there a positive result—shown by the development, a few weeks later, of swelling of a joint caused by the presence of sterile pus. Microscopic examination of the spinal cord showed acute cell changes in many of the ganglion cells of the anterior horn, though a not inconsiderable number of those cells remained intact. No change was found in the peripheral nerves. The affection of the ganglion cells of the anterior horn must probably be looked upon as the essential cause of the disappearance of the patellar reflex, but since the reflex disappeared in spite of the persistence of many "intact" cells, it seems not impossible that toxic influences affected parts of the grey substance not demonstrably diseased. Marked hypotonus of the muscles were present, and might result in the loss of the reflex when combined with even a slight lesion in the reflex path. The author inclines to the view that, in chorea minor, disappearance of the knee-jerk, when it occurs, is a temporary phenomenon depending partly on the effect of toxins on the reflex path.

The next case was a severe post-rheumatic chorea, with physical symptoms, in a girl of 16 years of age. In the last days of life an ophthalmoplegia developed, which appeared to affect all the external eye muscles except the external recti; the sphincter iridis was affected, the pupils were small, and no light reflex could be detected. The anatomical change found post mortem was an acute polioencephalitis hæmorrhagica on the floor of the third ventricle and the aqueduct of Sylvius. The extent and localization of the hemorrhagic process corresponded to that seen in the alcoholic form of polioencephalitis, a form which is also seen to develop as a result of infectious disease. The primary lesion in this case was probably an affection of the vessel walls, due to the action of toxins. The paralysis of the eye muscles could not have been essentially and solely due to the hemorrhages, but the author has already shown that in hemorrhagic encephalitis the clinical symptoms and the anatomical changes do not always exactly correspond. This case of the occurrence of an almost total ophthalmophagia in combination with a polioencephalitis superior hæmorrhagica in chorea minor seems to be unique in the literature. The author considers that both these cases support the theory that chorea minor is one of the infectious diseases.—British Medical Journal.

Sinus Stimulation in Resuscitation of the Heart.—Erlanger states that four series of experiments which he has performed indicate that tetanic-stimulation of the sinus region of the auricles is of material assistance to massage in the resuscitation of the heart. It causes the auricles to generate impulses, either rhythmical or irregular, to which the ventricles, when susceptible, respond. When massage administered for brief periods has failed to resuscitate the heart, the same period of massage combined with tetanic stimulation of the sinus has usually brought the circulation back to normal. In some instances massage alone when continued over long periods has been without effect, and to all appearances would have continued to be without effect, whereas at such a time massage combined with stimulation of the sinus has effected recovery. Whether the stimulus causes the auricles to beat normally or to fibrillate seems to make no essential difference in the end result. Not infrequently conductivity and irritability are lowered to such an extent by the cessation of the circulation, that impulses generated in an auricle started by stimulation can at first manifest no effect upon the ventricles. Under such circumstances massage alone or, more frequently, massage plus stimulation may cause the ventricles to beat with their inherent slow rate. Often then the force of the ventricular contractions is insufficient for the maintenance of an effective circulation. In such cases, however, with the gradual improvement in the condition of the heart, the auricular impulses, as a rule, soon begin to reach the ventricles, with the result that the latter immediately begin to beat more rapidly and effectively. The beneficial results of stimulation of the auricles, therefore, manifest themselves relatively late, but none the less effectively. It has been found that even after the heart has begun to beat, stimulation of the sinus region may still be of some assistance, though in another direction. It not infrequently happens that after resuscitation of the heart the blood pressure fails to rise above a certain low and insufficient level. In such

cases repeated tetanic stimulation of the sinus may accelerate the rise of blood pressure and so hasten recovery. No attempt has been made to determine the mechanism of this effect.—Journal of Experimental Medicine.

Renal Infantilism.

Of recent years a good deal of attention has been paid to the subject of infantilism, and the paper under review by Miller and Parsons (Brit. Journ. Children's Dis., July, 1913) draws attention to a type of infantilism associated with, and apparently due to, a perversion of the renal functions. The authors divide this condition on a pathological basis into two groups:

Group 1. Renal infantilism associated with organic renal disease (interstitial nephritis).

Group 2. Renal infantilism without organic disease of the kidneys (diabetes insipidus).

The degree of infantilism present is variable. In most of the cases where organic renal disease is present the stature of the child is greatly below the average height of children of corresponding ages. The mental development usually corresponds to the stature rather than to the age of the child. When no organic disease is present in the kidneys the infantilism is of a less severe grade. Genu valgum has been noticed in several cases. It may be regarded as evidence of the imperfect osseous development which obtains in other types of infantilism.

Of more importance are the special characteristics of the renal class of infantilism. The most prominent of these are polydipsia and polyuria. The thirst is severe and may be the cause of the infant coming under observation. The polyuria is sometimes of a very severe type, as in one case where in twenty-four hours a patient passed a weight of urine equal to one-fourth of his body weight. Bed-wetting repeated two or three times nightly is likely to be present. As a result of the polyuria the skin of the patient is very dry and the face characteristically wrinkled. The complexion is of a pale yellow tint, and in some cases marked anæmia is present. In the group without organic renal changes all the symptoms are of a less severe type. The age when the symptoms are first noticed is of considerable interest. In many cases polyuria was noticed at birth, and in these, growth was impaired from infancy onwards; in others the child was stated to be normal for the first few years of life, the thirst, the polyuria, and retarded growth manifesting themselves at the same period of childhood. The urine is much increased in amount, averaging from 50 to 70 ounces per day, and is of a low specific gravity. Cardio-vascular changes are present, consisting of hypertrophy of the left ventricle, heightened blood pressure, and thickening of the arterial walls. The etiology of the disease is somewhat obscure, although it is generally believed that cases coming under group 1 are due to chronic interstitial nephritis, and that those coming under group 2 are due to congenital syphilis and inherited nervous lesions. Hitherto no case of either type has been materially benefited by treatment.—Edinburgh Medical Journal.

Sclerema Cutis (Adultorum).

Galloway (Proc. Royal Soc. of Medicine) describes the case of a man 54 years of age, who stated that his malady followed rapidly after being exposed to a foul atmosphere, the unpleasant odor of which he found difficult to get rid of for a very long time. The hardening of the skin followed the incident, which occurred about three months before the case was reported, and had progressed The firm, swollen state of the skin was then noticeable from the face down to about the level of the groin, and was universal within those areas, though worse in some parts than in others. It was especially noticeable round the neck, over the arms, and on the skin of the back. The firm swelling of the skin impeded especially the movement of the neck, the shoulders, and elbows, and gave a peculiar expressionless appearance to the face. Some hardening of the skin had been noticed above the lower part of the thighs and knees, but had passed off. On the trunk a certain degree of erythema could be noted where the hardening of the skin was greatest or most acute. On the inner aspect of the arms the hardening of the skin was seen to have a lobulated texture. There was no appearance of sclerodermia of the usual type, nor of morphoea at any part of the affected area. The distribution of the affection was practically continuous within the limits of the affected region. A careful physical examination did nat reveal evidence of visceral disease, and had not suggested the cause of this unusual affection.

The author had employed the word sclerema to emphasize the distinction between this case and the ordinary type of sclerodermia, with which they were more familiar. It resembled much more closely the forms of disease in children in which the names oedema and scleeema neonatorum had been employed.—The Australasian Medical Gazette.

Technic of Securing the Vessels in Pelvic Abdominal Surgery.— Worrall (Jour. Obst. Gyn. Brit. Emp.) says that exposing, clamping and tying all vessels with catgut ligatures, using a surgical and two additional knots, the assistant slowly taking off the forceps during the tying of the additional knot, ane then taking again the vessel, if a large one, distal to the ligature during the tying of the second and third knots. In over 2000 abdominal sections the writer has had no case of secondary hemorrhage due to slipping ligature, whereas when he practiced transfixion and interlocking he lost three patients from this accident. Such disasters result from one interlocking loop pulling off the other when the uterus is raised to examine the pouch of Douglas as the concludiag step of the operation. When the broad ligaments are much thickened by acute infective processes and at the same time soft and friable it is not possible to follow the above method. In such cases the author transfixes but never interlocks, using the pedicle needle.

Saline Solution in Epidemic Diarrhea—Mackenzie (Brit. Josr. Child. Dis.) says that collaps in epidemic diarrhea is due to low pressure and accumulated toxins, and that the results obtained from injecting fluid are increased blood pressure and the passage of these toxins. It has been claimed that sea water plasma is preferable to the ordinary normal salt solution for this purpose, but from a series of personal obssrvations the author believes that the latter is equally srtisfactory. Subcutaneons injections should be resorted to, therefore, on the earliest indication of collapse and in the case of very young infants, at the first visit whether collapse is present or not. The immediate effect of sterile water seems to be the same as saline solutions, but it does not fully maintain the renal functions of the organisms for more than twenty-four to thirty hours without repetition, whereas salt solution does not require repetition for from thirty six to forty-eight hours.

Extraperitoneal Cesarean Section.— Russell (Soc. Roy. Soc. Med., Obst. and Gyn.) says that extraperitoneal Cesaeran section is not an alterative to the ordinary classical operation. Its technique is more complicated and it usually takes a little longer time. The classinal operation should be chosen for ordinary cases, and the extraperitoneal operation should be complementary to it and be reserved for cases advanced in labor with the lower uterine segment stretched by the over-lappting head or the impacted shoulder or for certain cases of impacted placenta pervia, the child being still alive. The healing of the wound has been proved to be quite as satisfactorily secured as in other methods when the right technic is employed. The different structure of the lower uterine segment and crevix favor healtng because it is not subject to the disturbing contractions of the uterine body. The patient stands a much better chance of her life with an infected uterine wound if it is extraperitoneal. The risk of hemorrhage is certainly not greater. It is usually less. There is no risk of hernia or of intestinal complications. Perhaps the most important consideration is the added scope that this method gives for the attainment of the ideal of Cesarean section,—the saving of the life of the child as well as that of the mother. There are certain cases of impacted, neglected, transverse or oblique presentations, central placenta pervia, and even such a complication as obstructing retraction ring, which come only or best within the scope of this operation.

Lipoid Content of the Placenta—(Bienenfield, (Monatsschr. f. u. Gyn.(has examined a cousiderable number of placentae, full-term as well as from the early months, likewise from eclamptic and syphilitic patients. The tissues were freed from blood and then prepared with sodium sulphate as a dried powder, which was subjected to extraction with petroleum ether for five days. The resulting extract was then studied for its total content of neutral fats and lipoids. In 100 gm. of the dried powder the extract varied from 3.59 to 8,59 gm., and seemed to be greater in amount in the placentae of early pregnancy than in those from eclamptic cases, while it was about the same in normal and syphalitic placentae. The amount of free chloresterin in the same quantits of material varied from 0.155 to 0.495 gm. being most in the placentae of early pregnancy, and least from those of eclamptic patients. It was also found that the petroleum ether extract of full-term placentae contained phosphorous only in traces, the phosphates being markedly increased in the placentae of early pregnancy, eclamptic and specific cases. The lipoid content of the full-term placentae was found to average about 0.42 per cent., whereas that of early pregnancy showed 2.49 per cent. The lipoid content of eclamptic placentae (0-44 per cent.) equals that of the normal placentae, and this is slightly increased in syphilitic cases. The neutral fats seemed to be diminished in normal pregnancy, whereas the eclamptic placentae showed a higher content (4.8 per cent) and those from syphilitic cases a lower figure (2.8 per cent.)

Manual Extraction of the Placenta.— Rogoff (Monatsschr. f. Geb. u. Gyn.) has

studied the material of the Moscow Maternity, which includes over 52,000 labors, among which a manual extraction was done in 1,243 cases, including 474 at term. He does not believe that the procedure is as dangerous as many claim, although care in its execution is essential. Rogoff states that the retention of the placental tissue in the uterus depends on incorrect conduct of the third stage of labor and, although adhesions to the uterus undoubtedly occur, they are probably not present in many cases where a manual extraction has been done. Before the latter procedure is resorted to, a Crede expression under anaesthesia should be attempted. It was found that the mortality after manual extraction was not of moment if no severe infection occurred before admission to the hospital, and with care, the morbidity is likewise very low. Rogoff considers that an intrauterine douche with a germicidal solution soon after the delivery of the placenta, an ice-bag to the fundus, and vaginal douches if the lochia becomes foul, are all essential factors in the production of a normal puerperium in such cases.

Clinical and Bacteriological Study of Laminaria Dilation of the Crevix.—Strauss (Zeitscher. f. Geb. u. Gyn.) presents the record of a series of 400 cases in which this method was largely employed for dilation previous to exploration of the interior of the uterus. Strauss believes that the advantages in comparison with other methods of dilation reside largely in the absence of nercosis. The introduction of tents is painless if carefully done, and likewise the period of dilation. In very nervous and sensitive patients, however, a small dose of opium is indicated. Tents, moreover, cannot cause any lacerations of even the smallest degree. It is essential to have different sizes at hand and to employ as a gauge the ordinary graduated Hegar dilators. Premature expulsion of the tent is avoided by a vaginal tamponade. The danger of infection during the manipulation is largely done away with by the employment of the thoroughly sterilized laminaria which are now in the market. He made a bacteriological examination of a series of sixty cases and found that, notwithstanding the most careful aseptic precautions, the ascending infection by vaginal bacteria cannot, however, be entirely avoided and it was possible to demonstrate an acute exudative endometritis in a certain percentage of the cases, although the clinical significance of the same is of little consequence. In this series of 400 cases a rise of temperature was noted in only 7 per cent. and in no case did any additional complications result. Regarding repeated introduction of tents as an element in infection, Strauss found that in thirty-nine cases where two tents were successfully introduced, a rise of temperature occcurred in only two and in three cases in which three introductions were made no rise of temperature resulted.

A Case of Purulent Menineitis in the New-born.—Bonhoff and Esch (Zeitscher. f. Geb. u. Gyn.) report a case in which this condition followed on otitis media. The mothers' labor has been normal but the baby developed evidences of cortical irritation with convulsions on the sixth day. A diagnosis of intracranial hemorrhage was made and a lumbar puncture undertaken. From the examination of the fluid evidences of an inflammatory process were demonstrated. The convulsive seizures continued and the child died on the fourteenth day after birth. The autopsy showed an extensive purulent meningitis with a well developed otitis media on the right side. The ear, the nasal cavity and ethmoid cells, as well as the umbilical vessels, and other points for the entrance of infection were perfectly normal. The bacteriological examination of the pus showed that the infective organism was a bacillus mucosus capsulatus. He says that the infection resulted through premature attempts of respiration by which liquor amnii and vaginal mucus found their way through the Eustachian tube into the middle ear. As the child was asphyxiated at birth and resuscitation attempted with the trachael catheter, it is also possible that this may have carried the infection into the mouth. The condition is probably more frequent than is generally assumed, and it is more important in similar cases to examine the middle ear.

Infantilism and Insufficiency of the Internal Secretion of the Testicles.—Souques (Presse med.) is of the opinion that absence of the internal secretion of the testicle is the cause of infantilism in the male.

There are various forms of infantilism corresponding to the particular genital organs that are affected by accident, operation or atrophy. The differentiation of certain cells of the Wolffian body causes the formation of the testicle in the male and the ovaries in the female. Failure to properly differentiate causes nondevelopment of these glands. Therefore considerations that apply to the resulting male organs may also be applied to the female. Infantilism may be congenital, development of the seconary sexual characteristics never having taken place, or it may be regressive, occurring after atrophy of the genital glands. Castration of young animals arrests the development of the genital organs,

hair, larynx, and muscular structures. Castration of adults changes only the secondary sexual characteristics. Ennichs have all the characteristics of infantilism, when emasculation has been complete. When only the testicles have been removed there is an arrest of the development of tee scrotum, prostrate, and seminal vesicles. The development of the testicle normally limits the height in some way, and its absence in the young male causes increased growth of the limbs, especially of the lower extremities. In another type of infantilism atrophy of the testicle is secondary to that of other glands, the hypophysis and thyroid. Destruction of the hypophysis causes a typical type of infantilism with a disappearance of all the sexual characteristics. A third type of infantilism is caused by combined lesions of all the glands of internal secretion. The author concludes that a testicular lesion alone will not always cause infantilism; its degree is dependent on the age at which it occurs and the degree of the lesion. The secretion of the interstitial portion of the testicle assures the development of the genital organs and the appearance and continuance of the secondary sexual characteristics. Its destruction or alteration, by whatever mechanism it is caused, may cause hypoplasia or regressive atrophy of the genital organs, or the non-appearance, or the disappearance of the secondary sexual characteristics.

Local Anaesthesia in Anterior Colpohysterotomy.—Tahler (Zent. f. Gyn.) says the question of combining the anaesthetic with suprarenal preparations has been studied. The injected fluid consisted of 100 c.c. of warm, sterile, half per cent. novocain solution with about twenty drops of Suprarenin. Ten cubic centimeters of the mixture are injected under the mucous membrane of the anterior fornix at the point where the incision is to be made. The paracervical tissue on either side is then injected, aud in about five minutes after the operation begun. The separation of the bladder is readily accomplished and after the anterior lip of the crevix down to the internal os is incised, 10 c.c. of the mixture are injected into the anterior uterine wall at the angle of the wound. The uterus is then cleared out and the incisions closed by sutures in the usual manner. If the fetus is of larger size, the extraction is done with perforation of the after coming head. The previous injection into the bladder of hypnotics or anaesthetics is not necessary. The operation was successfully done in nine cases of pregnancy varying from two to three and one-half months, which were complicated by a florid phthisis, or a heart with a broken compensation. Less than 50 c.c. of the solution were needed in these cases and no after effects observed. The recovery was without complications. The writer believes that the beginning of the fifth month constitutes the limit of pregnancy in which the method is justifiable.

The Roentgen Rays in Gynecology.—Weber (Munchener medicinische Wochenschrift) reports upon the use of the x-rays in the treatment of various gynecological conditions. Forty-nine cases of excessive climacteric hemorrhage were treated; seven of these did not follow the treatment to a conclusion; two cases of severe hemorrhage appeared not to be benefited; eight are still under treatment with marked benefit; 31 have been cured. In the last class some have passed the menopause, while others have been restored to a condition of normal menstruation. In four out of nine cases of menorrhagia or metrorrhagia in young women cure was effected, while in the remaining five no result was obtained. In three cases of dysmenorrhea marked benefit was obtained In myoma of the uterus no good results were noted. In one case in which the bleeding increased under treatment operation had to be resorted to. In three cases in which the x-rays have been used for the past six months in an attempt to bring about sterilization, conception has not occurred, although sexual intercourse has been kept up. The danger in this procedure would be that conception might occur with an ovum which had been injured by the rays, with the result that a malformed child might be born. In three mild cases of pruritus vulvæ good effects were obtained, but in three severe cases there was no benefit.

Treatment of Infected Abortion.—Haberle (Munchener medicinische Wochenschrift) reports upon 98 cases. These are divided into two clinical groups. To the first group belong those which had a temperature of 101.5° or upward before operation, and to the second group those having a lower temperature. In the first group there were 30 cases, among them being some with severe clinical symptoms. In 16 cases there were one or more chills with high fever. In four cases there had been attempts at curettement prior to admission to the hospital. Of these 30 cases two died, one of sepsis and the other of peritonitis. The remainder recovered and were in the hospital on an average of ten days after curettemen. No patient had a prolonged convalescence.

In the second group were 68 cases, of which three proved fatal, one from perito-

nitis and two from pyemia. The average stay in the hospital was 9.6 days. In one patient pyosalpinx developed after curettement and fever remained high for a week. The patient was discharged cured in nine weeks. In another patient a mild peritonitis with moderate fever developed. In all the other patients the process was purely local.

The results in this series in which the treatment was active were much better than in other series from other clinics treated in an expectant manner. The technique consisted in cleaning out the uterus with placenta forceps, the sharp or dull curette, or with the fingerf. Perforation of the uterus did not occur in any case. Following the cleaning out of the womb irrigation was done with ½ per cent. lysol solution and 10 to 20 Cc. of 20 per cent. solution of carbolic acid in alcohol.

The Treatment of Myocardial Disease.—Gibson, in The British Medical Journal, opened a discussion upon the treatment of heart-muscle affections apart from valvular disease, laying stress on the importance of rest, sleep, air, and diet. In tachycardia he combines the use of small doses of digitalis with bromides, preferably with calcium bromide. In bradycardia of toxic origin strychnine and belladonna were useful. Colchicum he used in very large doses in cases of a gouty nature. Thyroid extract was indicated in the large heart of mild myxedema. Suprarenal extract was equally useful in Graves's disease. Professor Cushny confined himself to an account of the investigations at the Mount Vernon Hospital, which he had recently carried out in association with Dr. Mackenzie, upon the action of digitalis, squill, strophanthus, and apocynum. The tincture of digitalis had been found to be the most reliable of these. The preparation used was highly constant, and when standardized varied only within 10 per cent. of the normal. In dilution with water the effect of strophanthus was rapidly lost, and there was considerable danger of overdilution in prescribing. The effect of strychnine, he believed, was most apparent in vasomotor paralysis. Dr. Dixon referred to the association of cardiac degeneration in cases of pituitary disease. In a case of acromegaly upon which he had recently seen a necropsy performed the heart weighed 3 pounds. Dr. John Hay had found chloral of immense use. He believed that the danger of this drug had been exaggerated.

The Relation of Animal Fat to Tubercle Bacillus Fat.—White and Gammon (Journal of Medical Research) say that the relation between the fat stored in the animal body and the fat in the tubercle bacillus growing in this animal body seems at first glance to be an indefinite one, yet an attempt to establish such a relation yields many points of interest, the correlation of which establishee a connection between the two which is apparently very close. The storage of fat in bodies that are the seat of tubercle infection is usually the basis of a favorable prognosis. On the other hand, in bodies which are the seat of a tubercular infection, which is gaining the upper hand, the rapid consumption of fat, greater than the accompanying fever would explain, is a marked feature. One of the problems connected with this relation of fat to tubercular infection is associated with the varied composition of the fat occurring in different animals in which the disease occurs. The tubercle bacillus has a very large content of fatty substance; this fat content varies in character and amount under varying conditions of growth and origin. The authors record their investigation on the behavior of the different stains of tubercle bacilli in different media containing different kinds of fat. It was found that in the test tube certain fats had a decided influence in determining the rapidity of growth of the tubercle bacillus as well as its staining properties and virulence. To 5 per cent. of glycerine agar tubes were added 6 per cent., and 20 per cent. of the following fats: human fat, olive oil, butter, linseed oil, beef suet, paraffin, and palm oil. Five tubes of each fat glycerin agar and five tubes of plain glycerin agar as control were then inoculated with tubercle bacilli of human origin, and a similar series with tubercle bacilli of bovine origin transferred from egg media. The human bacilli grew best on the human fat agar and butter agar tubes. The growth on the olive oil agar tubes was not so abundant as on the control glycerin agar tubes, and the growth on the linseed oil agar tubes was very slight. The bovine bacilli did not grow so abundantly as the human bacilli, but the growth on the human fat, olive oil and butter tubes was much in advance of the control glycerin agar tubes. Growth on the linseed oil tubes was scarcely noticeable at the end of six weeks. The beef fat in tubes did not stimulate the growth of either organism, although both grew slightly, and were cultivated again on egg media after two months. The palm oil tubes were not successful owing to the difficulty in securing uniform distribution of the fat with agar. On paraffin the organism grew after eight to ten weeks with a dry brownish appearance in the growth. The difference between the growth of the human tubercle bacilli on the five tubes of human fat glycerin agar and the growth on the five tubes of plain glyc-

erin agar was very striking, and was the same on all tubes, being one hundred times more abundant on the former. Smears were made after six weeks from the various tubes, stained in carbol fuchsin, and the time of decolorization determined by immersing for various times in 4 per cent. nitric acid in equal parts of acetone and alcohol. It was found that at the end of six minutes the organisms from the plain glycerine agar tubes were almost completely decolorized, while after ten minutes the organisms grow on human fat, olive oil and butter agar still retained their stain very evenly and well. Having determined these facts by repeated experiments, the authors then used fats which had been submitted to the action of liver extract prepared after the method described by Kastle. These liver-altered fats were then used in a similar series of experiments to those above described. The results of these experiments were in some instances more striking than the pure fat experiments. The growth of the human tubercle bacilli on each liver-altered human fat agar tube was four or five hundred times more luxuriant than on the plain glycerin agar. The growth on all the liver-altered olive oil and linseed oil tubes was also more abundant than on the plain glycerin agar tubes. The growth of the bovine bacilli was much more abundant on the liver-altered olive oil and linseed oil agar tubes than on the plain glycerin agar tubes. The growth of the bovine bacilli was much more abundant on the liver-altered olive oil and linseed oil agar tubes than on the plain glycerin agar tubes, but on all three of these groups less than on the liver-altered human fat agar tubes.

Salvarsan and Inorganic Arsenic in Non-Syphilitic Diseases.—Charteris (British Medical Journal) contrasted the therapeutic value of inorganic arsenic and salvarsan in Hodgkin's disease, leukæmia, chorea, and pernioious anæmia. In all these conditions it was found clinically that inorganic arsenic was of value by causing temporary improvement though rarely complete cure. Even in chorea relapses were common. The method of action was quite unknown. There was an effect on the blood forming tissue in the marrow. On the theory that salvarsan might act upon the unknown cause of these obscure blood conditions, intravenous injection of salvarsan was tried, but without any results to indicate that it was of more value than inorganic acid. In pernicious anæmia the intravenous injection of salvarsan had produced such an anæmia that the patients in two out of three cases died within three weeks, and the third patient was not improved, though he apparently was not damaged by the treatment. Both in chorea and leukæmia not only did the injection of salvarsan not cure the disease, but it even did not prevent the appearance of complications. Thus, in chorea an endocarditis ran a normal course after salvarsan, and attacks of perisplenitis still occurred in a case of leukæmia after salvarsan treatment.

The Pathology of Subacute and Chronic Mucous Entero-colitis.

Creazzo (Riv. di clin. Pediat.) says that many factors enter into the pathogeny of this affection. Nervous change and psychic deficiency is one of the conditions which predispose to the action of infective germs. These forms of mucous entero-colitis are contagious. Clinically the disease presents no striking difference with respect to the age of the subject. Diarrhœa is always preseut, and a general condition of intoxication and cachexia which frequently leads to marasmus. Fever is a secondary phenomenon which may be absent. The small and large iniestines contain an abundant mucous fluid of a yellowish color. The mucosa of the first half of the small intestine is usually thickened, œdematous, rarely atrophied, and the glands undergo a process of hypersecretion of mucus. In the second half, especially in the lower third, the mucosa is usually atrophied, the glands being affected as much as the villi; the muscular coat is always atrophied and sometimes the submucous. In the large intestine in some cases there are zones of atrophy, especially in the cæcum and transverse colon; the mucosa is more or less atrophied, frequently the glands; the muscular coat is rarely atrophied. There are tracts in which the coats are thickened and infiltrated—a condition which in some cases amounts almost to a kind of sigmoiditis or proctitis. There are thus hyperplastic and atrophic forms of colitis. Ulceration is frequent in the large but very rare in the small intestine, while swelling of the lymphntic follicles is general. The stomach and duodenum participate more or less in the process, and there are frequently fatty changes in the liver, slight sclerosis in the pancreas, and changes in the renal epithelium. The spleen is never enlarged.—British Journal Children's Diseases.

Effects of Radium Upon the Blood.

Small doses of radium salts in solution injected subcutaneously into animals sometimes cause slight pigmentation, but otherwise show little local or constitutional effect. Interesting results are, however, obtained if the blood is carefully examined. Thus, O. Brill and L. Zehner found in rabbits a most pronounced increase in the num-

ber of the red cells. In some animals as many as thirteen million cells were counted to the cubic mm. The percentage of hemoglobin is also higher, though not to the same degree. A leucocytosis was quite common, though the changes here were not so marked with red cells. No variations in the differential count of the white cells could be detected. The polycythemia is not a transient phenomenon, but apparently lasts for weeks. This is probably to be explained by the slow excretion of the radium salts. It is likely that these observations will be of the greatest importance in the treatment of anemic conditions in human pathology.—Berl. klin. Woch.

Miscellaneous.

Zinc Chlorida in Chronic Metritis.

The following treatment for chronic metritis advocated by P. Mocquot and J. Mock shows a number of marked advantages especially as to the permanency of results.

Following a careful cleansing and drying of the vagina the authors determine the permeability and position of the uterus with a sound. A fine cannula having minute lateral openings near its extremity is then introduced to the uterine fundus and 2 or 3 Cc. of a 6 per cent. solution of cocaine or novocaine injected while the cannula is gradually withdrawn. After waiting five minutes a tampon is placed beneath the cervix to protect the vagina and the cannula is reintroduced and 1 to 2 Cc. of the zinc chloride solution is injected. The solution may be more evenly spread over the mucous membrane by rotating the cannula as it is withdrawn. The vagina is then to be irrigated but not tamponed.

The best results with this treatment were seen in cases of hemorrhagic metritis and in metritis following abortion. Subsequent conception and labor are not interfered with. Rev. de Chir.

The Physician as Witness.

The Supreme Court of North Carolina expressed its opinion, in the case of Alley vs. Charlotte Pipe and Foundry Co., 74 Southeastern Reports, 885, upon the right of the physician as expert witness to testify as to the ills that are "liable" to result from an injury.

In this case's plaintiff's foot had been severely burned by a stream of molten iron. Upon the witness stand, a physician testified that the wound was such that sarcoma, or eating cancer was ltable to ensue.

Justice Brown, in commenting upon the propriety of this testimony said:

We recognize the general rule that an expert physician testifying to the consequences of a personal injury, should be confined to probable consequences, but in this instance we do not think the physician indulged in pure speculation. Jones on Evidence. §378. The word "liable" is defined as "exposed to a certain contingency more or less probable." Webster's Dictionary. The word was used by the witness in the sense of probable, and was doubtless so understood by the jury. The identical phrase was used in Montgomery vs. Scott, 34 Wisconsin 339, and upheld as a legitimate expression of opinion by a medical expert. In Kansas City vs. Stoner, 49 Federal 209, 1 C. C. A. 231, the court held that the plaintiff was entitled to recover for the probable effects of the injury, even though at the time not apparent.

We think the evidence competent, also, as tending to prove acute mental suffering accompanying a physical injury. The liability to cancer must necessarily have a most depressing effect upon the injured person. Like the sword of Damocles, he knows not when it will fall.

Roentgen Rays in Gynecology.

Fraenkel writes that the X-rays are at present considered of the greatest value in the treatment of fibroids. Submucous fibroids usually resist this form of treatment but tumors, situated in other parts of the uterus, even if very large, are considerably diminished in size in about half of all observed cases. In fully two-thirds or more the hemorrhages are checked up to complete amenorrhea. Patients advanced in years are more easily benefited than young women. The Roentgen rays are further indicated in pre- and post-climacteric bleeding and hemorrhage owing to large, flabby uterus in metritis. In dysmenorrhea, the rays may be used to aid differential diagnosis; thus if the condition improves, it is probable that the fault lies with the ovaries. Permanent sterility need not be feared since the doses necessary to provoke this are much larger than those employed therapeutically. A temporary sterility may however follow and is often desirable. Good results are also seen very often in tuberculous peritonitis.—Berl. klin. Woch.

Traumatic Rupture of the Intestine.

When force is suddenly applied to the abdomen, as for example by a kick from a horse, there is a very considerable risk of a rupture of the intestine, although the abdominal wall may show no sign of injury.

Tschistosserdoff (Beitr. z. klin. Chir.,) has collected 52 cases of this accident from the records of one of the St. Petersburg hospitals, and in a critical analysis of these brings out some interesting points. The condition is met with most frequently in young adult males; it is quite a rare accident in females and children. Weakness and flabbiness of the abdominal muscles and a greater or less degree of distension of the intestine predisposes to rupture when a sudden force is applied to the abdomen. The usual mechanism would appear to be a nipping of the intestine against the vertebral column, but the force may be of a tearing character. A blow applied at right angles to the abdominal wall is much more liable to cause a rupture of the intestine than is one in an oblique direction. In the vast majority of cases the abdominal wall shows very little damage; in only 3 out of 52 cases was there found any hæmorrhage into the subcutaneous or muscular tissues. In 75 per cent. of cases the rupture was in the middle third of the small intestine, in 8 per cent. in the upper third, in 12 per cent. in the lower third, and in only 5 per cent. was the colon involved.

As regards the symptoms in these cases, shock was a prominent feature only in those cases where the force had been applied over a large surface of the abdominal wall; in the majority of cases it was not pronounced. The presence of free gas in the abdomen with loss of liver dulness was seldom found (7 out of 52 cases). "Primary meteorism," i.e., tympanitis occurring during the first few hours after the traumatism, usually means, as Lexer first pointed out, that there is no serious injury to internal organs, but merely a bruising of the retroperitoneal nerve plexus, with possibly some hæmorrhage into the retroperitoneal tissues. Marked rigidity of the abdominal muscles and tenderness on pressure over some limited area of the abdomen are the most trustworthy signs of a rupture of the intestine. In all cases of doubt an immediate exploration should be carried out. Of 10 cases operated on within six hours of the injury 5 recovered, whereas of those in which the abdomen was opened twenty-four hours or more after the injury all proved fatal.—Edinburgh Medical Journal.

Treatment of Passive Congestion of the Liver.

Vires (Journ. des practiciens) after describing the etiology and symptomatology of this condition, states that in the congestive cardiac form the venous tension should be lowered by local or general blood-letting, and drastic purgatives employed. Physical and mental rest should be absolute. According to the severity of the symptoms, boiled water, and then boiled milk and water, and finally milk, should be administered. Then digitaline should be given for three consecutive days in doses of 1 mg. the first day and ½ mg. the two following days. A large amount of albuminuria is the only contra-indication to the drug. Theobromin in doses of 1.50 gram in three cachets per diem should be given for its diuretic effect. The functions of the liver being in abeyance, large intestinal lavages of boiled or alkaline water should be employed. In the cirrhotic form the specific cause, whether alcohol or syphilis, should be appropriately treated. When ascites has developed to a serious extent paracentesis should be adopted. Digitalis is not often necessary, but may be given in pill form, a pill containing 0.10 gram of aqueous extract of ergot, 0.10 gram of powdered squills, 0.25 gram of calomel, and 0.25 gram of powdered digitalis being given three times a day.—The Australasian Medical Gazette.

The Application of Sulphur.

In skin diseases, sulphur is most commonly employed as lotion or in the form of a salve, yet in either case its action is often too mild to bring about the desired cure. For a most intense action, Voerner proceeds as follows: 50 Gm. of potassium sulphide are dissolved in 100 Cc. of water. This intensely yellow solution is then painted upon the affected skin which must first be carefully dried and freed from fat. As soon as the solution has dried upon the skin, vinegar is sprayed on by means of an atomizer. Sulphur will be at once precipitated and will intimately adhere to the skin. A very efficient sulphur salve may be prepared as follows: 2 to 2.5 Gm. of sulphur are dissolved in 1 kilogram of fat, 45 to 50 Gm. of oleum sulphuratum are then added and finally the precipitate obtained from 40 to 50 Gm. calcium sulphate is intimately incorporated. The former procedure is indicated in seborrhea oleosa, acne rosacea, eczematous and follicular processes while the salve is excellent in seborrhea sicca, parasitic and suppurative processes.—Muench. med. Woch.

Treatment of Menstrual Disturbances.

The cause of an amenorrhea may be either uterine or ovarian. The former includes the type sometimes seen at the beginning of puberty and is generally due to insufficient development of ovarian tissue. Amenorrhea may also be induced by constitutional anomalies such as Basedow's disease, myxedema and chlorosis. Often a

change of environment or a sudden mental shock will lead to suppression of the menses. Severe infectious diseases or chronic diseases such as tuberculosis, nephritis, syphilis or malaria or intoxications with lead, alcohol or morphine may be the inciting cause. Local treatment in all these cases would not be in place but the underlying disease must be corrected. In rare cases both ovaries may be destroyed by tumor-formation. Uterine amenorrheas are less common and include lactation atrophy from prolonged nursing, infantilism of the uterus, destruction of the uterine mucous membrane due to too intense cauterization. In lactation atrophy, nursing should be discontinued, the infantile uterus must be stimulated by sounding and electricity. Hot vaginal douches and foot baths and the use of emmenagogues may be indicated. Where the mucous lining is destroyed by too much treatment, a cure is no longer possible.

Dysmenorrhea may also be uterine or ovarian in origin. In the majority of cases there are mechanical causes on the uterus such as infantilism, kinks, atresia or cicatricial stenoses, which require surgical correction. It is probable that endometritis alone is only rarely the cause. The etiology may be ovarian though the ovaries are not altered macroscopically and it is likely that the internal secretion of the organs plays an important role. In most cases, however, there will be changes of an inflammatory nature which cause a general congestion of all the pelvic organs. Finally, it must be remembered that many women with dysmenorrhea suffer from hysteria or neurasthenia and that they simply feel pains more intensely than normal women. The treatment in each case must be directed toward the cause but for the pain itself, codeine suppositories, pyramidon, aspirin or morphine may be required. The value of nasal treatment of dysmenorrhea is still undecided; similarly, the exact indications for the use of the Roentgen rays have not yet been determined.

Menorrhagia is usually induced by inflammatory processes about the uterus or the adnexa; sometimes retroflexion, myoma, carcinoma of the uterus or malignant tumor of the ovaries is responsible. In rare cases, there is absolutely no lesion (masturbation, sexual excitement, or interrupted coitus may here be responsible). General diseases such as hemophilia or nephritis, decompensation, acute infectious diseases or cachexia may be present as only etiological moment. In all cases, the treatment must be directed to the cause. The hemorrhage is generally controlled by hot or cold douches. The patient is kept in bed, an ice bag is placed upon the abdomen and internally she receives ergot, and food rich in gelatin. If no results are seen, adrenalin may be applied to the interior of the uterus and the vagina may be packed.

The treatment of climacteric bleeding is purely symptomatic. Sometimes, hysterectomy will be necessary. Recently, the Roentgen rays have been tried with good results.

Metrorrhagia is generally induced by myoma, carcinoma or polyp of the uterus or by ovarian tumors. The treatment is the same as that of menorrhagia.—Berl. klin. Woch.

Overloading the Canal.

Now that the opening of the Panama Canal—our canal—really draws nigh, we seem to be confidently expecting more and more of it. We seem to be pressing forward into the best seats, and waiting for the curtain to rise on an instantaneous prodigy of valor, a very miracle of industrial growth. Sometime—a new god of commercial prosperity, belike—will spring full-armed from the first tide through the istmus.

In this case, not distance, but nearness, lends enchatment to the view. And with all honour and credit to the canal and its promoters, it is to be tried under a tremendous handicap.

The canal is a big project. Big projects move slowly. Their advance depends upon a host of lesser objects. Many jubilant citizens, the country over, apparently expect that the formal opening of the canal will disgorge from ocean to ocean an immediate stream of ships. scurrying to carry their cargoes by short-cuts to profitable ports. These ports are waiting. Scarce a harbor on the Pacific Coast but anticipates (according to its home papers) a tremendous influx of shipping. The non-partisan observer might readily believe that with the opening of the canal a plume of coal-smoke flecked with bellying sails, would band the Pacific horizon from Panama to Portland. From New Orleans and the Gulf up-floats a hum of satisfaction and of preparation; the Atlantic Coast and the transcontinental railroads are presumed to be vying at new schedules of transportation; and the American citizen, whether he be producer or consumer. plans (as would again appear) a new system of business and of living.

This is overloading the canal, at the very start of the journey. It is cruelty to animals, if you please to pursue the metaphor. The canal will live up to reasonable expectations; after it is adjusted and has obtained momentum, it will doubtless live up to now unreasonable expectations. But grant it time to get its breath. A little

figuring with pencil and paper should be a wholesome aperient for the present enthusiast who cannot bear disappointment. Yes, even a little quiet reflection, apart from the madding crowd, will convince the most optimistic that the canal, experimental in its conception. must be experimental for some months after its birth.

The canal is big; the industries which it presumably will aid are big; the life which it ought to affect is big; and results must percolate slowly.

So, ladies and gentlemen, don't crowd the canal. It will be a little dazed and awkard at first. Stand back, and give it air; and wait.—Edwin L. Sabin in January Lippincott's

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The Canal and the Treaty.

Our government had precisely the same right to create the isthmian canal that it now has to construct one across Florida or to complete the ditch across Cape Cod. Nevertheless, we actually ratified the Hay-Pauncefote treaty, and thus gratuitously and absurdly limited our rights as respects our own canal There was no quid pro quo of any sort; so that we are not under obligation to England in this matter. But we are under every sort of obligation to ourselves. We must act with frankness and honor. No improper treaty can stand, if one of the parties to it gives open and fair notice of its desire and intention to withdraw. Thus the Japanese commercial treaties were perptual, on their face; but there was no real obligation involved in them, and Japan was justified in asserting her full rights of soveignty over her own tariff and judicial systems, and in abrogating those treaties. As a matter of fact, the people of the United States will not, in years to come, admit any limitation upon the sovereignty they exercises over the Panama Canal. But Congress ought not to enact a law that violates a treaty without first declaring its purpose either to denounced the treaty or to secure its abrogation Mr. Taft, to be sure, has held that the law is consistent with the treaty; but there is argumentative ground for the British view, set forth by Sir Edward Grey.—From "The Progress of the World." in the Americrn Review of Reviews for January.

State Board Examination Questions of Arizona.

ANATOMY.

1. What arteries supply the heart with blood, and where do they originate?
2. Describe the thoracic duct.
3. Describe the thyroid gland, including blood and nerve supply.
4. Where is the fissure of Sylvius, and what artery does it contain?
5. What muscles assist in (a) mastication; (b) deglutition?
6. Describe the diaphragm, its principal openings, and nerve supply.
7. Name the bones of the head.
8. Name the ligaments of the hip joint.
9. State (a) the nerve supply of the rectum and (b) the blood supply of the rectum.
10. Describe the inguinal canal.

PHYSIOLOGY.

1. What part of the nervous system is involved in stammering speech?
2. Describe the pneumogastric nerve and its functions.
3. Describe lymph and how it is formed.
4. Classify foods and give a general description of each.
5. What is the pulse and what do its varieties signify within physiological limits?
6. Describe the physiology of menstruation.
7. Briefly describe visual accommodations.

HYGIENE.

1. What means should be taken to prevent spreading of smallpox?
2. What means should be taken to prevent spreading of diseases in schools?
3. What regimen should be enforced in the sick room of tuberculous patients?
4. Why should we abolish the common drinking cup?
5. Describe the proper care of foods in stores and markets, and why?
6. What are the dangers from drinking water from an unprotected watershed?
7. Why are plumbing fixtures ventilated?

MATERIA MEDICA.

1. Define materia medica and therapeutics.
2. Define tincture, extract, and ointment.
3. By what process and from what source is sugar of milk principally obtained?
4. State the source of ichthyol and give its uses in medicine.
5. Give the Latin title of paregoric;name all its constituents, and give the amount of the principal drug in one ounce of the mixture.
6. Give the composition of the official compound cathartic pill.
7. Name the alkaloids of nux vomica.
8. What is incompatibility in medicine, and what are the different kinds of incompatibility? Give an example of each.
9. Describe four diuretics and give dose of each.
10. What class of acids would you use to

acidify alkaline urine? Name one and give dose.

CHEMISTRY AND TOXICOLOGY.

1. What element occurs most abundantly in Nature and what are three of its more common combinations?

2. Atmospheric air is composed of what elements and in what proportion by volume?

3. Give definition of acids and formulæ of six acids commonly used in medicine.

4. Define a salt and explain the difference between normal and basic salts.

5. What are hydrocarbons? Mention three.

6. Give difference between alcohols and ethers.

7. What chemical elements occur in all proteids? Name three common proteins.

8. What are the common sources of acetic acid?

9. Name the normal constituents of human milk and their approximate proportions.

10. Give treatment of arsenic poisoning.

11. What is the chemical antidote for carbolic acid poisoning? What would you use for physiological antidote?

12. What is best treatment for poisoning by strong mineral acids?

PATHOLOGY.

1. Define hyperemia and give varieties and causes.

2. Define transudate and exudate with examples of both.

3. Define (a) embolism, (b) thrombosis; examples.

4. Inflammation—define and give symptoms.

5. Describe the pathological findings in typhoid fever.

The Waste of Medical Experience.

When an old practitioner passes away his experience dies with him. Books there are in abundance and the reports of cases generally contribute something to the sum knowledge. Without such records progress would be impossible, and every case honestly reported adds a stone to the slowly rising temple of truth. But men like Jenner or Quill are represented in catalogues by only a few papers and addresses. What would one not give for the experience of a man who had been in general practice for half a century, who had seen many whom he had brought into the world grow up and in their turn become parents and then pass away, all the time under his observation! Such men seldom have time to write down what they see and what their practice has taught them. Often, too, they have not the faculty of exposition. Generally, however, such experience is so personal to the man, consisting as it does of the accumulated impressions of all the senses gathered by long observation, that by its very nature it is not transmissible to another. It was in this that the old system of pupilage had an advantage which modern scientific training, with all the apparatus of the clinical laboratory, fails adequately to supply. There is the physiognomy of disease, the interpretation of which has, owing to the large use of instruments of precision, become almost a lost art. There is the knowledge of that subtle something, called for convenience "constitution," which so often makes all the difference between success and failure in treatment, and other still more intangible things, which together make up the knowledge a man acquires in practice. The young man writes because he thinks he has something new to tell; the old man does not write because he finds age has made him indolent and he is perhaps unwilling to put his experience on paper. Yet if old practitioners could and would set down faithfully what they had seen and done in their professional career, a mine of information not to be found in textbooks or scientific monographs would be available.—British Medical Journal.

The Aetiology of Scarlet Fever.

Levaditi (Presse med.) reviews the recent work by Cantacuzene (v. British Journal of Children's Diseases, 1911, viii, p. 230), Bernhardt and others, and describes the experiments made by himself with Landsteiner and Prasek in Vienna and at the Pasteur Institute in Paris on five chimpanzees and one orang-outang. They found that swabbing the throat with deposit from the tonsils in the acute stage of scarlet fever produced in each case an angina similar to that of scarlatina. Inflammation of the tonsils, pillars and pharynx appeared after an incubation of two to three days. The angina was usually accompanied by fever and often by diarrhœa, and subsided in five or six days. Two chimpanzees, who had had a subcutaneous injection of blood and a glandular emulsion from a scarlet fever patient, in addition to the angina presented an intense general infection which proved fatal. In one chimpanzee the infection was accompanied by a generalized eruption resembling that of scarlet fever, in another the eruption was localized to the inoculation site. Typical scarlatinal desquamation was observed in the orang-outang only, following a mild angina and a discrete erythema of the thorax and abdomen. These experiments show that the anthropoid apes are more susceptible to the scarlatinal virus

than the lower apes. The virus,the nature of which is still unknown appears to exist in the tonsillar and lingual deposit, the blood and lymph-glands, and perhaps the pericardial fluid.—British Journal of Children's Diseases.

Late Rickets with Muscular Weakness, Obesity and Retardation of the Generative Functions.

Hutinel (Gaz. des hop.) describes the case of a girl, aged 13 years, the offspring of a healthy mother but alcoholic father, born after 8½ months' pregnancy, apparently healthy but very small. The child was breast-fed. At the age of three years the patient suffered for fourteen days from headache and vomiting. At eight and a half the left knee became painful and was treated by plaster immobilieation for genu valgum. The abdomen enlarged,the urine was abundant and thirst was troublesome. At the age of eleven abundant albumen was found in the urine accompanied by general œdema. A year later the patient complained of general fatigue and was unable to stand up. On admission to hospital rickety changes were found in the long bones and their epiphyses; the muscles were small, covered with thick layers of fat, and showed diminished galvanic and faradic excitability. The nails of the fingers and toes were transversely striated and much incurvated. On the head frontal and parietal bosses were noted add the thorax was typically rachitic. The urine was abundant and albuminous, and the impaired secretory power of the kidneys was proved by injection of methylene-blue, urea and salt. Alimentary glycosuria was also produced. The bony deformity, however, was anterior to the renal disorder, and the author therefore denies that the kidneys are the defaulting agents. The bony changes resembled not only rickets but osteomalacia. Other similar cases are quoted associated with diminished menstruation or amenorrhœa and small stature, but without renal disorder. The author considers that this dystrophy resembles that caused by alteration of the glands of internal secretion and particularly the hypophysis, adiposity and decreased genital power being associated with diminished functional powers of the posterior lobe of this organ.—British Journal of Children's Diseases.

The Pneumonia Convalescent.

In spite of all of the modern advances in scientific therapy, and the improvements in the general handling and management of acute infectious diseases, acute lobar pneumonia still deserves the title ascribed to it by Osler: "The Captain of the Men of Death." There are, however, especially during the fall and winter months, many cases of the lobular or irregular pneumonia that so often complicates or follows la grippe. When this condition supervenes it is more than likely to follow a subacute or chronic course and convalescence is frequently long delayed. Under such circumstances, in conjunction with treatment designed to hasten resolution, a general blood tonic and vitalizing agent helps materially to shorten the convalescent period. Pepto-Mangan (Gude) is of much value in this field, because it not only increases the solid elements of the blood, but also acts as a true tono-stimulant to the organism generally. As Pepto-Mangan is free from irritant properties and constipating action, it is especially serviceable in the reconstructive treatment of the devitalization following the pneumonia of the aged.

Coughs, Colds and Catarrhs.

In all but the most equable of climates, a very large proportion of the population suffers more or less from coughs and colds during the winter months. Many individuals who, at other times, are apparently in excellent health, contract a cold almost as soon as the cold weather commences, and are scarcely convalescent before another attack occurs, until a sub acute or more or less chronic naso-pharyngeal catarrh is established which is not thrown off until the spring opens. The frequency of such respiratory affections during the winter months is no doubt mainly due to surface chilling from frequent exposure to changes of temperature and the general lack of adequate ventilation of artificially heated houses, stores, offices and schools. Insufficient oxygenation,the longer "housing up" of the individual and the indisposition to open air exercise in cold weather undoubtedly serve to reduce the general vitality and the respiratory mucous membrane becomes less resistant and more readily subject to infective and catarrhal influences. When (as is usually the case) the patient cannot correct the unhygienic conditions referred to, it is the part of wisdom to tone up the general vitality of the patient and thus render his respiratory tract more resistant to morbific influences. This can best be accomplished by prescribing Pepto-Mangan (Gude) as soon as the more acute symptoms have disappeared. A thorough course of treatment with this efficient blood builder and general tonic reconstructive very frequently places the patient in a position to successfully ward off further catarrhal attacks.

FIELD WORKER MAKES AN INTERESTING REPORT.

Miss Hyatt Cites Examples of Conditions that Obtain and Gives Facts Covering Work Done Thus Far in This State.

The following is a part of the report of Miss Sybil Hyatt, field-worker for the North Carolina school for the Feeble Minded. The report was made to the trustees of the institution at their annual meeting held in Kinston on the 6th and 7th of December, 1912. As yet the field-worker, owing to the short period she has been engaged, has been able to cover only a very small portion of the State.

In her report Miss Hyatt says:

"Dr. Hardy was the first superintendent in the South to ask Dr. C. B. Davenport, the secretary of the Eugenics Section of the American Breeders' Association, which is employing me, for a field worker. Dr. Davenport appreciated Dr. Hardy's earnest desire and the opportunity to open the work in the South so much that he made several efforts to get a donation to pay one.

"The association is largely composed of eminent scientists and breeders, but it is reaching out its arms after every patriot, because of the alarming increase in the number of defective children in proportion to the population.

"Field-work has shown that a feeble-minded child never occurs by heredity in a fraternity, unless two affected strains have crossed each other, and that the defect can be bred out in a few generations.

"The ultimate aim of the school is the elimination of feeble-mindedness from the race by the segregation of the individuals and the education by field-workers of every family that has produced a case.

"Last summer I heard Dr. H. H. Goddard say at New York University and Dr. E. L. Thorndike at Columbia University, that every other question before our nation is small beside this. I knew it was so, because they said it, but the full significance of the fact did not bite into my comprehension until I did enough field-work to know that few can say with certainty, 'my family is not affected by this trouble.' Strains of feeble-mindedness are combined with brilliance, honor, industry and integrity in families that are our pride and glory."

SOME EXISTING CONDITIONS.

"After we have answered the call to arms, the time is certain when the buildings we have erected to protect and cherish our affliction will be used for something else, because from one end of North Carolina to the other, no mother will ever look into a little child's face and have a heart break to see that it has received an impoverished birth-right and will never be able to fend for itself.

"Many, who have told me where to find feeble-minded children, have said: 'Don't mention my name. I don't want them mad with me.' I have found nobody resentful about my visits. And I have been thanked with deepest gratitude for my interest.

"A gentleman and his wife, both as fine as egg shell china and infirm with age, have a niece about 35 years old, who is a jabbering epileptic violent tempered imbecile. He said to me, 'this is what we have faced every day for thirty years. Nobody knows the sorrow but those who have borne it. Such as she is, we love her dearly, and we would never part with her if she were not such a tax on our daughters. The school is one of the greatest blessings that has ever happened to North Carolina.'

"One mother has a 12-year-old slobbering idiot, that has never walked or talked, and three other little children, two of them beautiful. She said 'the child takes so much of my time that I cannot care for my other children praperly. She has grown so heavy, lifting her is injuring me. She gets in violent rages, tears off her clothes and throws things dangerously. The county gives me $3 a month, but that does not near take care of her. I know it would be a fine thing for her and for my other children for her to go to the school. But I love her more than I love everything else, and I feel like I would lose my mind if I could not see her every day.'

"The affection of mothers for feeble-minded children is terrible. They ought to be separated early and forcibly, if necessary. They become bound by a thousand fastenings to this crucifix of anguish, and feel they will die of misery without its support.

"All the time, I know I have the biggest job in the world, but some days, I cannot feel very happy."

INFORMATION ON THE SUBJECT.

"Those who wish to join the American Breeders' Association can send the money for membership to Department of Agriculture, Washington, D. C. The dues are: Annual $2; life $20; delegate (perpetual) $25. The annual members can pay for 1913, and ask for the special eugenics issue of the American Breeders Magazine, which will soon be out, free. They will receive the American Breeders Magazine, a quarterly, for one year, the annual report A. B. A. and the Out Door World and Recreation Magazine for one year. This last is a present from Mr. Charles Willis Ward, life member of the association. It is worth $2

to receive full information about the greatest movement in history from headquarters, aside from patriotism.

Persons interested in eugenics and eager for literature will like to have Heredity in Relation to Eugenics, by Dr. C. B. Davenport, published by Henry Holt & Co., 34 West 33rd street, New York, $2. The Heredity of Richard Roe, by David Starr Jordan, published by American Unitarian Association, Boston, Mass., $120. Mental and Moral Heredity in Royalty, by F. A. Woods, published by

"On all orders from North Carolina, $3, the publisher will pay postage and a commission. This will go into a fund to pay for charts, etc , for lectures on eugenics.

"'A Method of Measuring the Development of the Intelligence of Young Children,' by Alfred Binet and Th. Simon, can be obtained from Dr. Clara Harrison Town, Lincoln, Ill."

The next annual meeting of the American Breeders' Association will be at the University of South Carolina, Columbia, S. C., January 24 27 next.—Kinston Free Press.

New Biological Laboratory.

The handsome building we are illustrating has recently been added to the group of biological laboratories of H. K. Mulford Company at Glenolden, Pa.

The building is constructed entirely from basement to roof of hollow tile and concrete, making it a fireproof structure throughout.

It is divided into departments, each department being a unit, and complete in itself. The east end of the building is devoted to the handling of serum and globulin products. On the first floor bleedings are received from the bleeding room, serum or plasma is removed from the clot or from the corpuscles, as the case may be, and the product stored immediately in cold-storage

rooms belonging to this group.

When the serum or globulin has been tested and is ready to be finished, it is delivered to the group of antitoxin and serum filling rooms. The bulk stock is kept in cold-storage rooms connected with this group. Immediately adjoining the twenty filling rooms is the labeling and packing room for serum and globulin products. This group also has its own cold-storage rooms. Elevators at each end of the building convey the completed packages to the shipping rooms. After inspection and checking off against a duplicate set of records shipments are made.

Each of the twenty filling and serum rooms is supplied with washed and filtered air. The special apparatus used for this purpose is guaranteed to remove 98 per cent. of suspended matter from the air supplied to these rooms. Not only is the air filtered but its humidity and temperature are controlled thus giving the employes the benefit of the best possible working conditions.

On erch floor glass partitions between the halls and rooms permit the demonstration of the work to visitors without their entering the rooms themselves.

The laboratory floors are of asbestolith. The advantage of this material is that there are no seams or cracks and is impervious to fluids. It partakes more of the nature of wood than of cement and because of a cushiony layer beneath the surface crust, is more acceptable to employes than cement floors.

On the lower floor are the stock rooms. The sterilizing rooms are in a separate building well supplied with ventilating skylights.

On the third floor are found the lecture room, library and museum.

The entire plant is arranged and managed under the unit system. A separate building or group of buildings, or in some cases portions of larger buildings, are devoted to the preparation, standardization, packing and shipping of each product. Each unit is in charge of scientific experts in their particular branch of bacteriology. Cold-storage rooms supplied with cold air from a central refrigeration plant form part of each individual unit arrangement. This makes it possible to keep on hand a large stock of biologicals without danger of deterioration, so that the Company is prepared at all times to supply these products and to with the enormous demands often created by epidemics of the various infectious diseases.

Epinephrin in the Circulation.

Janeway and Park state that the modified Meyer method of parallel tests upon segments of surviving carotid and coronary arteries from the ox, is a satisfactory means

for detecting epinephrin in complex body fluids like blood. At the present time there is no evidence that epinephrin, in amounts sufficient to produce its physiological effects upon any hitherto used test objects, exists in the circulating blood, with the exception of blood from the suprarenal vein. The examination of uncoagulated blood from six persons with high blood pressure has failed to show the presence of epinephrin or other constricting substances. The constrictor substance in defibrinated blood and serum is not an epinephrin-like substance. In its point of action and its effects it is similar to barium chloride. It is a direct stimulant to smooth muscle and seems to have no relation to the sympathetic innervation of muscle.—Journal of Experimental Medicine.

Sarcoma of the Thyroid Perforating the Trachea.

Paterson reports the case of a woman, aged 45, who was admitted to the hospital complaining of difficulty of breathing with a swelling in front of the neck for about six weeks. There was a considerable degree of dyspnea with cyanosis. There was a flat, hard, painless swelling over the thyroid, and involving that organ. In the larynx the cords moved not very freely, and in the subglottic region a greyish irregular mass was seen filling up the greater part of the tracheal lumen. Tracheotomy was performed under a local anesthetic. The incision went through soft friable tissue, the trachea being found deeply placed, having been pushed towards the spine by the growth. A portion of tissue removed showed it to be a small round-celled sarcoma. Its complete removal was considered impossible. At the end of a fortnight the growth had invaded the skin wound, and pieces of growth were coughed up from time to time. The opening was kept patent by a rubber tube. The patient died suddenly in the night about a month after her admission to hospital. The growth involved the thyroid gland and the neighboring parts. The upper part of the trachea above the opening was filled with round masses of growth which had apparently perforated the anterior wall. Death had taken place by hemorrhage escaping into the lungs from one of the intratracheal growths.—Proceedings of the Royal Society of Medicine.

The Irritability of the Sympathetic Nervous System.

Boschan states that Loewi has shown that one may obtain an idea of the condition of the sympathetic nervous system in a human being by introducing a drop of a one per cent. solution of adrenalin into the conjunctival sac. In normal individuals there does not result any dilatation of the pupil. This, however, does take place in certain cases of diabetes and Graves' disease. The adrenalin mydriasis occurs only when the irritability of the sympathetic is abnormally raised. Boschan investigated this reaction in 170 cases, including healthy and sick infants. The reaction was negative in the healthy newborn, in healthy infants of various ages, in the premature, in cases of chronic nutritional disturbances, in chronic infection, in acute digestive disturbances that are not accompanied by constitutional symptoms, and in acute infections without toxic symptoms. The reaction was positive in moribund infants, in cases of enteritis accompanied by toxic symptoms, in all acute infections with toxic manifestations, and in a few chronic diseases. There is apparently a close relationship between toxic ailments on the one hand and the presence of Loewi's reaction on the other, and since in these cases there is an increased susceptibility to cocain, it is concluded that the pupillary reaction indicates an increased irritability of the sympathetic nervous system as the result of toxic conditions. The adrenalin mydriasis has no diagnostic significance. Its presence indicates always that a toxic condition is getting worse, while the disappearance of this reaction corresponds to an improvement in the clinical picture.—Monatschrift fur Kinderheilkunde.

Physiological Influence of Ovarian Secretion.

McIlroy states that the ovary controls the nutrition of the uterus and other reproductive organs, since removal of both ovaries causes atrophy of the muscular and glandular elements of the uterus, etc., the degree of atrophy being in direct proportion to the length of time which has elapsed since the operation. There is also a diminution in the uterine blood vessels, and a tendency to atheroma—a condition very closely allied to fibrosis of the uterus in the human subject. Menstruation and œstrus do not occur after complete removal of both ovaries. In young animals after oophorectomy the infantile type is maintained. Removal of the uterus, or retention of uterine secretion, does not affect the functional development of the ovaries, seeing that the elements of the ovary are well preserved after hysterectomy and ligation of the uterine horns. Retained uterine fluid does not counteract the atrophy of the uterus which takes place after removal of both ovaries. There is thinning out of the uterine wall at the point of greatest distension, and no compensatory

hypertrophy has been observed. Removal of one ovary causes compensatory hypertrophy of the other in the anœstrous state. That the interstitial cells perform the chief role in the maintenance of the nutrition of the uterus is evidenced by (a) the survival of these cells in grafted ovaries, (b) the follicles becoming absorbed or cystic, and (c) the fact that no atrophy of the uterus occurs when these cells are present. The interstitial cells become functionally active during pro-œstrum, as shown by their being enlarged and their cytoplasm becoming infiltrated with a lipoid substance (in female dog). That the corpus luteum is the part of the ovary which exerts the most active influence upon the body as a whole is shown by the fact that corpus luteum extract when injected causes rise of the general blood pressure. From the result of one experiment it was found that the ovaries do not play such an important part in the elimination of calcium as is supposed, since after castration the calcium output was increased, whereas it was diminished as the result of administration of corpus luteum extract. Removal of the ovaries in rabbits causes an increased deposit of fat in the tissues of the body.—Proceedings of the Royal Society of Medicine.

Salvarsan in Pregnancy and the Puerperium.

Langes (Wien. med. Klin.) has treated with salvarsan eight pregnant women and twelve puerperal women suffering from syphilis, a positive Wassermann reaction being taken as proof of the disease, sufficient for working purposes. All three methods of injections were employed. The dose given was 0.3 gram by intravenous injection and 0.3 to 0.6 gram by subcutaneous or intragluteal injection. The intravenous injections gave rise to practically no unpleasant side effects, except fever which started from a half to two hours after the injection, and lasted for from four to five hours. The other two methods of injection gave rise to marked infiltrations and considerable pain. The effect upon the Wassermann reaction was more prompt when intravenous than when intragluteal injections were made. The eight cases treated during pregnancy were all in the last three months. In all the syphilis was latent. In five of the cases one injection sufficed to change the Wassermann reaction to negative; in the other three cases a second injection was given with the desired result after delivery. In none did the injection cause labor pains to set in. None of the children in this group showed symptoms of syphilis, nor was the reaction positive in any of them. One case of cerebro-spinal syphilis which had been treated with salvarsan outside the clinic was admitted twenty-four hours later in labor; the seven months' fetus was macerated and syphilitic, and it seems most probable that, with a dead fetus, salvarsan had been the cause of the beginning of labor. Of the nine puerperal women, eight were cases of latent syphilis, one of secondary syphilis. In the case the woman had been delivered of a seven months' macerated fetus; one other woman had aborted at the fifth month; the others had gone to term, but one child had a positive reaction at birth, and one suffered from severe syphilitic pemphigus and died a few hours after birth. The other five children were non-syphilitic. Indirect salvarsan treatment was effective in the case of the child with a positive reaction, which became negative at the end of three weeks. The five children non-syphilitic at birth were all breast fed, and none of them showed signs of syphilis later. It is noteworthy that none of the children of the mothers who were treated during pregnancy were syphilitic, while almost half of the children of the other mothers were manifestly syphilitic, or had a positive reaction. It thus appears that salvarsan cannot be given too early in pregnancy where symptoms of syphilis are present. The author believes that salvarsan treatment followed by a mercury cure may prevent abortion in a syphilitic woman and lead to the birth of a healthy, non-syphilitic child. The Dr. would have the Wassermann reaction tested in all unmarried women in order that salvarsan might be administered if necessary. While indirect treatment through the mother suffices to change the reaction when no other symptoms are present, he doubts whether it would be enough in cases of severe "florid" syphitis of the child. The series of cases are in opposition to Colles' laws that mothers of syphilitic children are immune from syphilis if they show no symptoms of the disease; on the contrary, the serum test shows that such mothers are to be looked upon as syphilitic.—Indian Medical Record.

Few remedies employed in the treatment of diseases of women have gained the commendation of so excellent an authority as Dr. H. Marion Sims, who was called the father of gynæcology, who said, (Vol. 2, Grailly Hewitt, on "Diseases of Women)" "for severe dysmenorrhea, I have found Hayden's Viburnum Compound of great service." Like expressions since the time of Sims have been uttered by many of the best men in the medical profession.

Viburnum compound (Hayden's)* has

*New York Pharmaceutical Co., Bedford Springs, Mass.

stood the test of time for twenty-six years and is the recognized standard viburnum compound by which imitators would measure, most of them saying in some words or other: "Ours is just as good as viburnum compound (Hayden's)."

In the treatment of dysmenorrhea whether of congestive, neuralgic or membranous type, this valuable preparation acts most promptly and effectively. In menorrhagia where the flow is excessive as a result of any one of the several causes, it affords relief by imparting tone to the uterus and stimulating its contraction. Abundant clinical evidence has conclusively proven that it is as effective as ergot without possessing the narcotic and objectionable properties of that drug.

In obstetrical cases, viburnum compound (Hayden's) is of particular service. It modifies the pangs of childbirth by its soothing effect upon the nervous system, and by its anti-spasmodic action upon the uterus, making it particularly serviceable in cases of rigid os. On account of its great value and high reputation viburnum compound (Hayden's) is extensively imitated, all of the imitations that we have seen being of comparatively little worth. Only when the original viburnum compound (Hayden's) is specified can definite therapeutic results be assured.

The Pyrogenetic Action of Lactose.

Schlutz (Am. Journ Obst.) records some experiments which were carried out on rabbits. Lactose was given intravenously (alone, or combined with physiological salt solution or Ringer's solution), subcutaneously, and by the mouth. When administered by the mouth it was also given either alone or in conjunction with physiological saline or Ringer's solution. Intestinal disturbance was then produced in the rabbits by feeding them with *B* oxybutyric acid and croton oil. The results warranted the conclusion that: (1) Lactose, if given intravenously, subcutaneously, or orally, possesses no distinct pyrogenetic effect; (2) it does possess a definite though not pronounced influence on the temperature if it is given subcutaneously or orally in a diseased intestinal tract in combinction with a medium containing a sodium salt such as physiological saline or Ringer's solution. The results, though definite, were hardly so pronounced as would be expected from the effect produced clinically by the administration of lactose in similar conditions, and were far from explaining the pathogenesis of the fever occurring in alimentary intoxication.—British Journal Children's Diseases.

Ether Anaesthesia by Intravenous Infusion.—Napier (Glasgow Med. Jour.) says that the solution used was 5 per cent. solution of ether in normal saline which is injected into one of the veins in the arm. In addition to the usual preparation of the patient a hypodermic injection of morphine hydrochlyride (1/6 to 1/4 grain), and scopolamine hydrobromide (1-100 grain) should be given about three-quarters of an hour before operation. In very strong and vigorous patients it is advisable to give this injection about an hour and a half to two hours before operation, and to give an additional dose of morphine about an hour later. The atropine lessens secretion and is said to prevent reflex cardiac inhibition. The morphine and scopolamine render the patient drowsy and semi-conscious, so that struggling during the induction period is reduced to a minimum, and a very small amount of ether is required to maintain a satisfactory state of anæsthesia. The method is specially useful in operations on the head, throat, and neck, as the anæsthetist does not encroach on the field of operation. It answers well in cachectic patients generally. It may be employed with advantage in collapsed abdominal cases and in operations attended by surgical shock, e.g., ruptured ectopic gestation, Wertheim's operation, operations for removal of the breast, etc., that is, in cases where saline transfusion is beneficial. The method is contraindicated in the alcoholic, plethoric, and muscular tyye of patient, in cases where there are advanced changes in the vascular and pulmonary systems, and in all cases in which transfusion would increase backward pressure on the right side of the heart. The method has the following advantages: (1) The patient is spared the disagreeable sensations attending the administration of an inhalation anæsthetic, (2) there is no primary irritation of the respiratory organs or of the heart; (3) a very small amount of anæsthetic is used; (4) anæsthesia, when produced, is of a calm and placid nature; (5) there are no after-effects.

The Immunity of Infants to Infectious Disease.

Although the young infant appears to be particularly susceptible to infection through the digestive tract, causing diarrhœa and enteritis; through the respiratory passages, resulting in broncho-pneumonia; and by way of the skin, causing erysipelas and other cutaneous affections, there is an apparent immunity in the infant to the eruptive fevers, measles, scarlatina, chickenpox, smallpox, typhoid and diphtheria, and to a certain extent to tuberculosis also. If

young infants were as subject to those infectious conditions as older children, the mortality amongst them would be much greater, as the resisting power of the infant to serious diseases is less the younger he is.

It is impossible to explain this immunity of the infant, though possibly the exceedingly rapid growth and nutritive changes in the young child give the tissues bactericidal properties against certain infectious germs. Whatever the explanation may be, it is important to bear in mind that this immunity to many infectious conditions does really occur, and that epidemics of the eruptive fevers do not occur in assemblages of young children under a year old. When an epidemic of measles occurs in a creche it is rare for it to commence among the little babies. It is almost invariably children between one year and four years who are first attacked.—La. Clin. Inf.

Anemia.

This recalcitrant condition has been found to respond rapidly to treatment with Vanadium. Vanadiol, a derivative of Vanadium, rapidly increases the hemoglobin content of the blood, the relative red cell count, and accelerates the work of digestion. Give it a trial, Doctor, in your next case. Samples and literature free to you if the Charlotte Medical Journal is mentioned. Address Vanadium Chemical Company, Vanadium Bldg., Pittsburg, Penna.

An Historical Medical Exhibition in London.

For the first time in 21 years the International Medical Congress will meet in London in the summer of 1913, and, in this connection, an exhibition of rare and curious objects relating to medicine, chemistry, pharmacy and the allied sciences is being organized by Mr. Henry S. Wellcome. The response to the appeal for loans has been most successful, with the result that probably one of the most interesting collections of historical medical objects ever gathered together will be on exhibition during the meeting of the Congress.

Among other interesting sections is one including the medical deities of savage, barbaric and other primitive peoples. Through the kindness of friends, specimens of these have been forwarded from all parts of the globe, but there are still many gaps to be filled, and those who possess such objects, and would be willing to loan them, should communicate with the Secretary of the Exhibition, whose address is given below.

Amulets, talismans and charms connected with the art of healing will also form another prominent feature and any loans of this description would be welcomed.

In the section of surgery, an endeavor will be made to trace the evolution and development of the chief instruments in use at the present day, and it is desired to accumulate specimens of instruments used in every part of the world by both savage and civilized peoples.

In pharmacy and in botany special exhibits are projected, which will include models of ancient pharmacies, laboratories and curious relics of the practice of alchemy in early times. Specimens of ancient and unusual materia medica from all parts of the world will also be exhibited.

A complete, illustrated syllabus will be forwarded to any one interested on application to The Secretary, 54a, Wigmore Street, London, W. England.

The Inunction Treatment of Measles.

According to Connolly the method of treatment employed by Dr. Milne is given, as follows, in his book: "For the first four days in a scarlet fever case—and presumably also in a measles case—commencing at the earliest possible moment, I have pure eucalyptus oil gently rubbed in all over the body, morning and evening, from the crown of the head to the soles of the feet. Afterwards this is repeated once a day until the tenth day of the disease * * * *." "The tonsils, however, I always swab with a 1-10 carbolic oil every two hours for the first 24 hours. Only on rare occasions have I found it necessary to swab the tonsils for a longer period than 24 hours, and never when commenced early. My method is to make a firm mop of cotton wool on the end of a pair of forceps, thoroughly soak the wool in the carbolic oil, and then swab the tonsils and the pharynx as far up and down as possible. It is advisable, however, to use a tongue depressor and depress the tongue as far as possible * * * The mop used should be rather larger than the last joint of the patient's thumb. The wool should thoroughly cover the end of the forceps (or lead pencil), while a fresh swab is used on every application."

In Connolly's cases, the Milne method, just described, is followed in the main, with, however, some modifications. As soon as the child is received into the special ward assigned to measles, a hot bath is given. Then follows a thorough application of the eucalyptus oil to the whole of the body, with the exception of the hands and the part of the face round about the nose, mouth, and eyes. The mouth is irrigated twice daily with weak alum lotion, and glycerine and borax if applied to the interior of the mouth and to the gums. The throat (tonsils and fauces) is treated with

carbolic oil (1-10) morning and evening, in a similar manner to that described by Dr. Milne. Every day for the following four days the child is blanket-bathed morning and evening, and again rubbed all over with eucalyptus oil, the throat and mouth having the same treatment as on admission.

It will thus be seen that a more determined attack is made upon the mouth and throat. In most of the cases, it was found that the gums were very red and more or less swollen, and often quite definite ulceration was present on the inner side of the cheeks and lips, much larger and whiter than Koplik's spots. Further, it was believed that by attacking the mouth and throat one was striking at one of the chief strongholds of the virus. Connolly is of the opinion that the moist spray and particles, coughed out by the patient, are highly infectious to a susceptible person. In those cases in which broncho pneumonia is already established, the statement holds true to a greater degree.

As regards the thorough rubbing in of the eucalyptus oil, some local effect would, doubtless, be produced, but the main idea was to get the vapor inhaled into the air passages. If the virus were dwelling in the skin or the subcutaneous tissues, it seems reasonable to suppose, too, that direct conflict would take place between the eucalyptus absorbed and such virus as might be present. The face area was omitted, because of the irritation caused to the eyes by the vapor, and it was not thought necessary to apply the oil to the hands.—The London Practitioner.

Operating Room Economy.

Asa Bacon, superintendent of the Presbyterian Hospital, Chicago, before the National Hospital Association, talking on this subject, said:

I shall treat the subject from a purely business standpoint and not a professional one. I believe it is the duty of the superintendent to co-operate with the surgical and nursing staff, so as to bring about proper team work, as well as to provide suitable supplies, instruments, etc., to produce the very best results for the patient. It is a fact, however, that very few superintendents know how rubber gloves are made, and as this is such an important item of expense, and as there are so many poor gloves on the market, I shall, as a matter of information, tell you in as few words as possible how one of our leading manufacturers makes gloves.

When the surgeon throws aside a pair of gloves, mend them for the interne, and from the interne send them to the floors for dressing purposes. So far as possible, buy heavy gloves. They last much longer, and are cheaper in the end.

As a matter of information and comparison, my bill last year for all rubber gloves used in the hospital was $522. We cared for 2,609 surgical patients, including 244 obstetrical, and had 2,702 operations. This makes 20 cents per surgical patient for gloves.

From my experience, I find 16 20 gauze, 20 to 21 yards to the pound, shipped in packing boxes, the most economical. By carefullp buying and selling the boxes. your gauze bill should not be out of proportion to your other items of expense, providing proper economy is used in distributing.

Suture Material.—Silkworm gut, catgut and surgeon's silk can be purchased to better advantage in the raw state and prepare it yourself.

Rough German Catgut—No. 0-1-2-3, is a very economical catgut to use. However, many surgeons prefer the smooth. Braided silk, whether white or black, is stronger and more economical than the twisted.

Iodine Method of Preparing Catgut.—Roll catgut tightly on glass reels. Tie ends firmly. Drop catgut as wound into clean glass jars. (Mason jars will do). Cover catgut with solution of iodine 300 parts, ether 1,700 parts, and leave immersed for seven days in air tight jars. Then pour off iodine solution into original bottle or on to freshly wound catgut. Pour ether (commercial) on sutures. Keep pouring off and on until the ether solution comes away clear.

Preparation of Silk-worm Gut.—Wind around fingers to curl so as to occupy less space. Boil for half an hour in covered basin; remove with sterile forceps; place in covered sterile jar, and cover with 95% alcohol.

The anesthetic bill can be greatly reduced and at least a part of the anesthetist's salary can be met by extra fees from patients who wish the services of an expert.

Small hospitals having one operating room can easily install their own nitrous oxide plant, provided they have a small room, say 8x10 feet, adjoining the operating room.

In using ether it is economy to buy the best and purest.

Gowns—Gowns can be made cheaply in the sewing room, at the same time using a pattern to suit the surgeon. The cost is from 75 cents to 90 cents each, according to material used.

Some Small Leaks and How to Prevent Them—A large pad of gauze is often used to wash a patient when a sponge or two is sufficient.

Intractable Coughs and Colds

—owing their prolongation to constitutional or systemic weakness —are usually bound to continue until the nutrition and vitality of the whole body are substantially improved. The well-known capacity of

GRAY'S GLYCERINE TONIC COMP.

to spur physiologic processes, promote functional activity and restore the nutritional tone of the whole organism, readily accounts for the benefits that promptly follow its use in all affections of the respiratory tract.

¶ When local remedies fail, or at best give but temporary relief, "Gray's" can be relied upon to so reinforce the natural protective and restorative forces of the body that even the most persistent catarrhal diseases are quickly controlled and overcome.

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LISTERINE

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Listerine is particularly useful in the treatment of abnormal conditions of the mucosa, and admirably suited for a wash, gargle or douche in catarrhal conditions of the nose and throat.

In proper dilution, Listerine may be freely and continuously used without prejudicial effect, either by injection or spray, in all the natural cavities of the body.

Administered internally, Listerine is promptly effective in arresting the excessive fermentation of the contents of the stomach.

In the treatment of summer complaints of infants and children, Listerine is extensively prescribed in doses of 10 drops to a teaspoonful.

In febrile conditions, nothing is comparable to Listerine as a mouth wash; two or three drachms to four ounces of water.

"The Inhibitory Action of Listerine" (128 pages) *may be had upon application to the manufacturers.*

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The wornout towels can be made into pads to wash patients.

Large, thick pads put on clean surfaces absorb more alcohol, but some operators consider a large pad necessary.

Save the gauze. You can greatly reduce your bill by washing, sterilizing and using it again.

Use cheap cotton or gauze for pads instead of the high-priced absorbent.

Use cheap cotton for clinking windows and doors when fumigating. Save the cotton and use it again.

Replace glass-top tables as fast as they break with porcelain, enameled iron or nickel.

Use bottle dispensers for alcohol and liquid soap instead of pouring on the hands in the old way.

Bags used for sterilizing utensils, when worn out, make good dust cloths, iron-holders in the laundry, and they can also be used for wiping machinery in the engine room.

Urethral catheters are ruined by boiling. Save them by sterilizing in alcohol.

Mend the gloves. They can be used by the internes and nurses in the operating room, and for dressing patients.

It is economy to have uniformity of solutions, uniformity of sutures, uniformity of needles, uniformity of instruments, uniformity of everything so far as possible.—Exchange.

Injury and Nervous Disease.

In view of the existence of the Workmen's Compensation Act the importance of reliable evidence as to the effect of injury in the production of mental disease is very apparent. Any reliable information on this subject is therefore very welcome. Dr. Warrington relates his experience, and also refers to the general literature of the subject in an important paper (Med. Chron., June 1911, p. 121). The only mental disease of which he writes is general paralysis. This, however, is the chief one in which the question of injury is likely to arise. Dr. Warrington quotes with approval Mott's opinion that it occurs only in the subjects of congenital or acquired syphilis. There is no doubt that the arguments in favor of this view become stronger with every advance in the knowledge of that disease. If such is a medical man's opinion the only question he has to answer in a compensation case is—Has the injury precipitated or accelerated the disease? Dr. Warrington concludes that to prove either of these it is necessary that the injury should be of considerable severity, causing distinct concussion or entailing prolonged confinement in bed. If the injury has been slight the mental shock must be severe, and shown by severe symptoms. The time interval between the injury and the first appearance of mental symptoms must not be too long—not over a year and a half. Post-traumatic dementia must be capable of being excluded. To facilitate this differential diagnosis the author gives the symptoms of general paralysis and of post-traumatic dementia as well as of cerebral syphilis, cerebral arteriosclerosis, and alcoholic dementia with which general paralysis may be confounded. It will thus be seen that this paper is most helpful and informing.—Edinburgh Medical Journal.

Treatment of Epilepsy.

Five years experience in the treatment of epilepsy by the salt deprivation method is detailed by Ulrich (Munch. med. Wochenschr, 3rd September 1912), the director of the institution for epileptics at Zurich. Few physicians, he states, have pursued this form of treatment for more than a few months at a time, and therefore he records the results he attained by the administration of bromide in the absence from salt from the diet over a period of five years. The cases are given in full detail, but the features of one may be taken as typical of all. The epileptic attacks had in this case lasted for 30 years, during which the total number of seizures had been about four thousand. During at least sixteen years bromide treatment had been carried out to the extent of one and a half to two drachms of this drug daily. There had been no improvement—indeed the number of attacks were rising, and in 1907, when the patient was on bromide only, there were 207 attacks; while after the salt-free diet was combined with bromide administration the attacks fell to 37 in 1908, 51 in 1909, and none at all in 1910. In another patient aged 31 there had been 3300 attacks in 12 years of bromide treatment. Starting a salt-free diet in 1907 she had only 152 seizures as against 226 the previous year. Next year they fell to 39, and then for two years she had complete freedom. In several other cases there was either a complete stoppage of the fits or a reduction of their number by about 50 per cent. when the salt-free diet was instituted. Mair (ibid) describes the results obtained both with these cases and with other in a psychiatric clinic by using a soup made from "Sedobrom" tablets. These contain each about 16 grains bromide of soda, a very little salt and sufficient extractive and fat to taste like a strong meat soup when dissolved in 100 c.c. of water. Two of these tablets were given night and morn and were well

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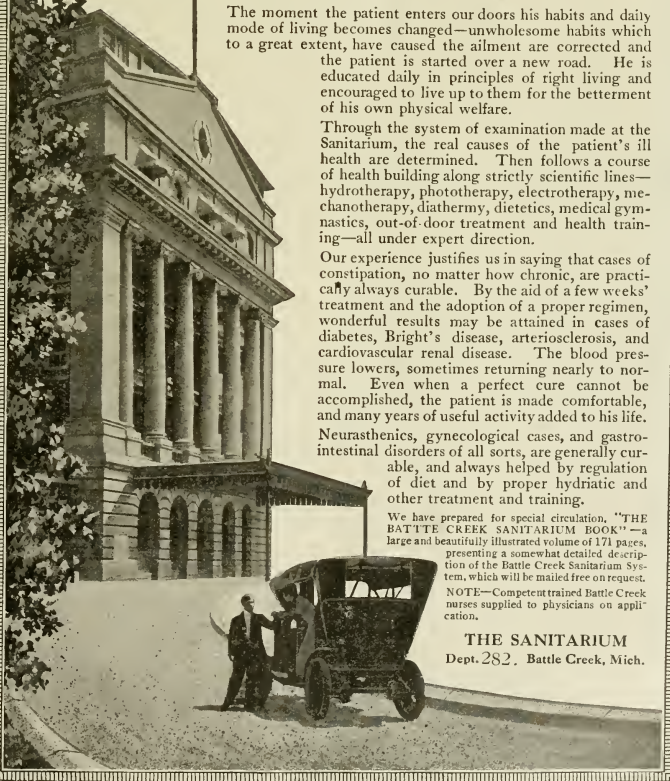
Through the system of examination made at the Sanitarium, the real causes of the patient's ill health are determined. Then follows a course of health building along strictly scientific lines—hydrotherapy, phototherapy, electrotherapy, mechanotherapy, diathermy, dietetics, medical gymnastics, out-of-door treatment and health training—all under expert direction.

Our experience justifies us in saying that cases of constipation, no matter how chronic, are practically always curable. By the aid of a few weeks' treatment and the adoption of a proper regimen, wonderful results may be attained in cases of diabetes, Bright's disease, arteriosclerosis, and cardiovascular renal disease. The blood pressure lowers, sometimes returning nearly to normal. Even when a perfect cure cannot be accomplished, the patient is made comfortable, and many years of useful activity added to his life.

Neurasthenics, gynecological cases, and gastro-intestinal disorders of all sorts, are generally curable, and always helped by regulation of diet and by proper hydriatic and other treatment and training.



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borne. The rest of the food was made as poor in salt as possible.—Edinburgh Medical Journal.

Electro-Magnetic Treatment of Cancer.

Various forms of radiation have tried of recent years in cancer and rodent ulcer, sometimes with benefit, sometimes with none. Spude (Munch. med. Wechenschr., 30th July 1912) describes a method of combined electro-magnetic application with arsenic which he has found successful in healing up two cases. One case was that of a cancer affecting the inner canthus of the eye. The other cancer was situated in the center of the forehead. The method consisted in the injection of a suspension of of black oxide of iron directly into the tumour near its margin, and the subsevuent application of an electro-magnet over its surface. After 60 seances spread over 4 months the eye tumour had become covered with healthy epithelium, but a mass remained until the writer also began intravenous injections of atoxyl at intervals of 4 to 8 days. After 5 weeks of this combined treatment the tumour completely disappeared. In the other case the iron and arsenic were both injected locally, the main mass of the tumour was removed with the sharp spoon, and complere disappearance had taken place in about thirty weeks.—Edinburgh Medical Journal.

Intramuscular Injections of Salversan.

Joha is the concentrated (40 per cent.) emulsion of Salversan in iodipin and lanolin. According to A. Schmitt it is an ideal way of giving the drug intramuscularly. Among 93 patients, slight pains were com plained of early in only 35 and these rarely lasted longer than 6 hours. The pains were pronounced in only six and lasted three days in only one case. Infiltrations were noticed in 16 cases. In the great majority there were thus neither tenderness nor induration on repeated examination. The after-effects resulting from the injection were very few and fever or arsenical symptoms were seen only exceptionally. Joha is especially indicated where the patient cannot be admitted to a hospital or where an intravenous injection is not possible as in children or where the veins are not fully developed. The effects of the disease are the same as with small doses injected intravenously though not quite as rapid. In all cases it is desirable to combine active treatment with mercury with this medication.—Muench. med Woch.

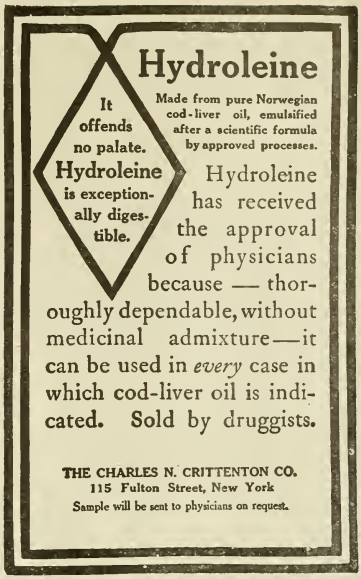
Functional Derangement of the Liver.

Baiu says in the British Medical Journal that in the treatment of functional derangement of the liver (the chief causes of which are gastro-intestinal disturbances, alcoholic excess, rich and highly seasoned foods, fevers, nervous influences, and residence in in the tropics), one should aim at diminishing the amount of work the lrver has to perform, and facilitating the circulation through it. There must be limitation in the food supply. A mixed diet is the best, the articles being of simple composition. Three meals a day are advised, unless the gall bladder be involved. Carbohydrates and fats should be limited, as the former tend to ferment, and the latter are not easily absorbed if the quantitv of the bile excreted is diminished. Alcohol should be forbidden. Other irritant and pungent substances, such as mustard, pepper, horseradish, ginger, cloves, strong meat broths, large quantities of salt, and the empyreumatic substances formed in baking and roasting should be avoided. In most cases it will not be necessary for the patient to exercise dietic self denial for more than a week. Rest after meals should be enjoined, so that functional hyperaemia of the organ is not disturbed. Exercise, such as golf is very important. With increased respiratory effort the liver is rhymathically compressed, and the venous blood flows more rapidly to the heart. For those patients who take little or no exercise, massage, general and special, is desirable.

Plannenstill Treatment of Lupus Vulgaris and Scrofulous Lodema.

Sequeira reports the case of a poorly developed girl, aged sixteen, whose father suffered from phthisis. The girl had always been delicate. She had pneumonia when young, and had had measles fifteen months ago. The lupus started upon the back of each wrist eight years ago, and the lesions had been scraped. They gradually spread after the operation, and eventually reached the elbow and the upper arm. A little later the face was affected. Fifteen months ago she had what was described as being a tuberculous abscess behind the left ear. This was opened. Her hearing became affected, and she was very deaf. Her voice was husky. She came to London Hospital in January, 1912, with extensive lupus of the nasal cavity and of the pharynx and palate. There was also double epiphora. There was extensive lupus, with some central scarring upon the hands and forearms up to the elbow. In February, 1912, the back of the right hand became much swollen and edematous and a localized purplish-red swelling developed over the back of the right wrist. This was 2 inches in its long diameter and 1½ inches transversely. The

swelling evidently fluctuated, and it was opened and a thin yellowish pus was evacuated. Later a small oval swelling formed along the line of lymphatics. On February 21 she was admitted to the ward, and the arm was put on a splint. The ulcerated areas in the nose were treated by packing with gauze, which was kept constantly moistened with a solution of peroxide of hydrogen 10 vols. At the same time she was given 30 grains of sodium iodide per diem in divided doses. The tampons soaked with the peroxide were kept constantly in position, except when the patient was asleep. Finding so much improvement of the intranasal condition in this as in numerous other cases treated by the Pfannenstill method, the author had the ulcerated areas upon the forearm and wrist dressed in similar fashion, with great benefit. The case illustrated the value of the method, particularly in the treatment of ulcerative lupus of the cavities. The patient had borne the iodide very well, and to make sure that the condition was not complicated by congenital syphilis a Wassermann reaction was performed, with negative result. The patient has gained 7 pounds while in the hospital, and her general health hsd improved greatly:—Proceedings of the Royal Society.



The Treatment of Cardiac Failure in Diphtheria Coghlan.

Coghlan in the British Medical Journal says that the treatment of patients suffering from cardiac failure acccmpanied by persistent vomiting should be conducted on the following lines: (1) Tha head should be low to prevent cerebral anaema, while the foot of the bed should be elevated. This may help retention of the rectal feeds. (2) Patients during the stage of cardiac depression become restless, and throw of the bedclothes. They should therefore be warmly clad, and for the same reason hot-warer bottles should be placed in the bed. (3) All food by the mouth should be stopped, and nutrient anemata should be administered. The rsctum should be irrigated twice daily with warm boracic solution, otherwise irritation may be set up, and retention of nutrients become impossible. The treatment of cardiac depression must be combated by the administration of medicines. Various drugs have been used for this purpose, chief amongst them being strychnine, belladonna, and adrenalin. Since administering them in combination hypodermically, he has had four successful cases, though, of course, he has also had his failures. The formula used is as follows: Atropine sulphate, 1-100 grain; strychnine hydrochloride, 1-100 grain; adrenalin chloride solution (1 in 1000), 5 minims; water, 20 minims; to be administered hypodermically every four hours. That the above mentioned combination exercised a beneficial influence on the favorable course of the cases followed Coghlan is convinced, and in this opinion he is supported by Dr. Foord Caiger, who watched the cases with him from the very commencement. Thirst may be treated by the administration twice daily of small enemata of normal saline solution, whilst teaspoonful doses of iced water may be allowed as soon as the vomiting ceases. Dryness of the mouth may be alleviated by the application of glycerin and borax. Pain is most rapidly relieved by hot fomentation. It is important to bear in mind that, owing to the serious cardiac depression, all purgatives are contraindicated. For this reason small enemata of glycerin and water are preferable.

Alcoholism in the Eighteenth Century.

Charles Mercer presents the following interesting description of the convival customs of former days: "In the latter part of the eighteenth century, people sat down to dinner at 4 or 5 o'clock in the afternoon. Dinner was a stately and solemn ceremony, as needs must be when host and hostess carved for their guests, and were allowed

after each course a quarter of an hour's law, to eat their own when the others had finished. After two or three hous, the cloth was removed, and the decanters went round in coasters on the polished mahogany. After a decent interval, the stories began to broaden, and the ladies retired, while the gentlemen settled down to the business of the evening. From that time until midnight, drinking went on; not rapid or furious drinking, but slow and steady absorption, as the decanters went round. From time to time the process was accelerated by host calling upon one of his guests for a toast, or a sentiment, and then all weare obliged to fill and empty their glasses. Nowadays no one notes whether a health is actually drunk or not, but in those days the rule against heel taps was rigorously enforced, and he who left any remainder in his glass was held to be wanting in respect and loyalty to the toast, and might very well have to answer for his negligence next morning in a duel. The fashion of the toast is still with us, but in a mitigated and attenuated form. We do not now toast the reigning beauty, and the rule against heel taps is no longer enforced; and we are spared altogether the horrors of the sentiment. We are not now called upon after dinner to drink to 'the reflection of the moon on the calm bosom of the lake,' or to 'the man who would place king and country before life and wealth.' We should as soon think of toasting the man who broke the bank at Monte Carlo.

"In the days I speak of, our forefathers did not dine by the light of the electric filament, or of incandescent mantles, for in the reign of George III, these conveniences had not yet been invented. They dined by candle light, and from time the servants came in to snuff the candles, and took the opportunity to loosen the cravats of those guests who had subsided under the table. At length the orgies came to an end, and the half-drunken servants staggered in to carry their wholly drunken masters to bed.

"In those days, the doctor was often half seas over when he attended his drunken patient; the pastor was often drunk in the pulpit; judge, counsel, and attorneys pursued their avocations in court in a prevailing atmosphere of hot coppers. The Prime Minister went drunk to the House of Commons, where he was attacked by the leader of the Opposition, also drunk, while order was kept by the Speaker who was half seas over, There was no excise on spirits, and the coarser kinds of distilled spirits were rediculously cheap. As you passed along the bye streets of London, and perhaps of other great cities, you might read the legend hung out over the drink cellars, 'Here you may get drunk for a penny; dead drunk and clean straw for two pence.' "—The London Lancet.

Woman's Place in Medicine.—H. Drinkwater takes exception to the statement frequently made that women have not contributed very materially to the advancement of practical medicine, for there are at least two therapeutic measures for which they can claim credit. Madame Mouffer possessed a secret nostrum for the treatment of Tenia solium, and in 1775 Louis XVI. purchased it from her for 18,000 francs. It proved to be the rhizome or male fern. This was its introduction into France. It fell into disuse until again recommended by C. Peschiers in a work published in 1816. The discovery of radium was due chiefly to Madame Curie. Though it cannot be claimed for women that up to the present they have contributed largely to the theoretical or practical side of medicine, surgery, or gynecology, there is one closely related subject in which they have certainly taken the initiative and leading part, and which they have brought to a high state of perfection as a science and an art—namely, nursing. Women were closely identified with the early history of obstetrics. One thing which helped to place the greater part of the practice of midwiferery in the hands of women—in England as well as on the Continent—was the fact that most of the physicians and many of the leading surgeons were members of the priesthood; and we read that Guy of Chautic thought it did not become a priest to have anything to do with obstetrics or gynecology, What the future will bring no one can tell. At present, medical women occupy so many posts as lecturers, hospital physicians, surgeons, ans accouchenses, medical officers of health, school medical officers, besides those in general practice—their number is so rapidly increasing, and their work is done in such a satisfactory manner—that the chief difference between medical men and medical women will be a numerical one of the latter will give their attention to original research and pursue it with the the same enthusiasm that they manifest in other departments. — Liverpool Medico-Chirurgical Journalr

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Shakespeare's Allusions to Syphilis.

Morris states that there is ample evidence that during the Stuart and the Tudor and the Commonwtalth periods of English history syphilis was rampant in England as well as in France and Italy. It is sufficient for proof to quote Shakespeare in regard to the first, and Wiseman in regard to

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Freedom from Acid reaction,

Stability in vacuo,

The property of retaining strychnine in solution for an indefinite period, and

Pre-eminence in arresting disease.

Reject < Cheap and Inefficient Substitutes Preparations "Just as Good."

the latter periods. The word pox reminds one of the frequent use Shakespeare made of it. It appears at least four or five and twenty times collectively in fifteen of his plays. He used it as a curse, or an imprecation of impatience or evil. Thus, Iago says to Roderigo, who talked of drowning himself: "A pox on drowning thyself." Sir Andrew in "Twelfth Night," referring to a certain knight who was a celebrated fencer, says: "Pox on't, I'll not meddle with him." In "Measure for Measure," Barnardine in his prison exclaims:

"A pox on your threats! Who makes that noise there?" In "Love's Labor Lost" we find even ladies of quality—ladies in attendance on the Princess of France—making similar exclammations, such as, "A pox of that jest!" In "All's Well That Ends Well" a French lord in a camp near Florence says of a soldier: "Let him fetch off his drum;" and he is answered by another French lord:

"A pox on't, let it go, 'tis nothing but a drum."

In "Two gentlemen of Verona" the servant of one of the gentlemen says to him of the other: "A pox of your love letters." In "Henry IV," in "Hamlet," in "Cymbeline," in "The Tempest," and other plays there is similar employment of the word, which is equivalent to "Damn," or "Damn it" of the present day, and that the constitutional and local symptoms of the disease must have been quite familiar to the man in the street and to the ordinary man in society. It is quite obvious from the context of several of the passages in which the word occurs that it was the great pox and not the smallpox which had given it currency and to which allusion was made. For example, in "Pericles, Prince of Tyre," the virtuous Marina, the daughter of Pericles, who had been taken captive by pirates and sold to a brother keeper, is cursed in the following manner by a Pander of the Bawd, for not yielding her honor on the solicitation of the customers: "Now the pox upon her green sickness for me!": and the Bawd replies to him: "Faith, there's no way to be rid on't but by the way to the pox." Shakespeare was quite alive to the pains of periosteal nodes, to tendon gummata, to ozena, to the loss of hair, to the voice changed by syphilitic laryngitis, and to the sallow, withered look of the skin of the face in late syphilis. He speaks of a "pox of wrinkles," and the makes Timon tell Phrynia and Timandra, in language which shows a considerable knowledge of the characters of secondary and tertiary syphilis:

"Consumption sow
In hollow bones of man; strike their sharp hins,
And mar men's spurring. Crack the lawyer's voice,
. . . down with the nose;
Down with its flat; take the bridge quite away
Of him that is particular to 'foresee
Smells from the general weal; make curl'd-pate ruffians bald;
And let the unscarred braggarts of the war
Drive some pain from you. Plague all;
That your activity may defeat and quell
The source of erection.

—Proceedings of the Royal Society of Medicine.

The Successful Doctor in the Seventeenth Century.

Bernier, in his Histoire Chronologique de la Medicine (Paris, 1695), gives a summary in verse of the whole duty of medical man. The doctor who aspires to success, he says, must not be modest, but must do all he can to push himself forward, talking confidently with his brethren. He need not bother further study, but should use every effort to establish useful connections. For introduction into families women are useful. Fashionable ladies, devout women, coquettes—all should be conciliated. Every one, even the meanest servant, should be cultivated. The young doctor should bring all his science to bear on satisfying fools. Let him remember that what one says of him another will repeat, and it is from this gossip celebrity springs. To get the reputation of having much business he must take care not to be found at home; when he is in bed, let his servants say that he has been called out to a case. Let him give out that he has to be out whole nights; that the longest days are too short for him; that he is called everywhere. in fact, that the practice so much sought for by others comes to him against his will and overwhelms him. Even when his trouble is poorly paid, he should speak of the big fees that are forced upon him for a visit. This hint scattered among good friends may wake up those who are asleep. The young doctor should dress as much like a man of fashion as possible that he may gain the good graces of the ladies. In the street he should bow to one side and the other, courteously saluting every one he passes. He may ride in a chariot or be carried in a chair; two carriers in a street attract much attention. Let his successes be attested by dukes and mar-

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quises. Everything, it is urged, that can advance one's interests is legitimate; even self praise is allowed. If some parts of this exhortation remind one of the arts of Mr. Robert Sawyer, late Nocke'morf, one has the satisfaction of knowing that at the present day the arts which were considered necessary to success in medicine in the seventeenth century are extinct. The puff, direct and oblique, self-assertion, subtle detraction, intrigue, and the whole art of scheming to attain the lofty ideal monstrari digito, et dicire, Hic est—of course all things are unknown in this age of professional probity, or at any rate are condemned by all high-minded practitione s as obsolete and dishonorable—British Medical Journal.

Rich Man's and Poor Man's Gout.

F. W. Langridge notes that in talking of cases of arterio sclorosis and cardiac pain associated with the toxemic conditions which give rise to heightened arterial tonus, Alexander Morison says: "It calls for treatment by the recognized diet and regimen. The wealthy, over-fed, and idle might do worse than follow Abernethy's advice to such a patient, namely, to live on sixpence a day and earn it, with a little balneological treatment thrown in by way of consolation for their temporary and exemplary self denial! 'Poor man' gout' is usually a consequence of the excessive imbition of malt and other alcoholic liquors taken to enable him to cope with the excessive labor which is generally his lot, or to procure for him a transient exhiliaration and oblivion in his struggle for existence. The treatment of this condition is education and political rather than medicinal, though in statu anginoso the measures which are found to relieve Dives will also be of benefit to Lazarus. A touch of colic makes the whole world kin.' "—The Clinical Journal.

Growth of Displaced Normal Tissue.

Craster concludes that the repeated transplantation of a piece of skin from one to another conferr no exceptional power of growth upon that skin. The repeated implantation of skin into one animal decreases, if anything, its receptivity for such grafts. The burial of skin in the interior of the body causes, after a time, a change in the skin of such a nature that it cannot resume its normal function as an external covering tissue, even when its circulation is well maintained and it is buried in the body of the same animal. The author's experiments do not determine how long the cells of the skin actually remain alive, and indeed it is conceivable that the mere maceration of the protecitive horny layer puts the skin, when re exposed, into the position af a moist tissue, such as the intestinal mucosa. so that it readily dries up and succumbs. Nor do the experiments throw any light upon the possible existence of cytolitic substances in the circulating fluids, although naturally, the idea of such an action has alwap been present in the author's mind in observing the gradual loss of vitality in the transplanted tissues.—Journal of Expeoimental Medicine.

Gymnastics in the Treatment of Psychomotor Instability.

Dr. Paul Boncœur (Progres Med., September 9th, 1911) advocates the use of rational gymnastic methods in the treatment of certain cases of mental defect in children in whom there are symptoms of motor restlessness or lassitude. He is the head of a medico-pedagogic institute, and speaks from his own experience of the bene fits of such methods. Their essential feature, if they are to be successful, is that they make a constant appeal to the various senses, and insensibly train the faculty of attention. All automatism is severely banned, because there is then no appeal to the attention, and even though great physical benefit may result, the mental faculties are in no way stimulated, and this is the main object desired. To attain this result the exercises must be interesting, they must not be unduly prolonged, they must be changed at given signals which vary for different movements, and they are best carried out to the accompaniment of music. Changes of rate and rhythm can in this way easily be egected. In his experience great benefit may be derived both in training the elementary mental faculties and in educating the muscles in the performance of coordinated movements. As in other forms of education, and to an even greater degree in this, each pupil must be studied individually, and the exercises modified to suit the individual requirements. The onset of fatigue must be carefully looked for, and if possible avoided. He gives an outline of a number of exercises which, with the necessary intervals for rest, require half an hour. This, he thinks, is as long as it is desirable to give at one lesson.—Edinburgh Medical Journal.

The Asexualization of the Unfit.

As is well known, this subject has been publicly discussed in America to a much greater extent than has been the case here. Already four States—Indiana, California, Oregon, and Connecticut—have passed laws authorizing such a procedure under due precautions. But for the action of the Governor of the State of Pennsylvania a similar

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AN ABSOLUTELY STABLE AND UNIFORM PRODUCT THAT HAS GAINED WORLDWIDE DISTINCTION THROUGH ITS DEPENDABLE THERAPEUTIC EFFECTS IN THE TREATMENT OF

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law would now be in force there also. Dr. Barr, the chief physician of a State institution for mental defectives, pleads for the extension of such legislation, and gives his experience of the results of sterilization in 200 cases (Alienist and Neurol., February 1912, p. 1). He states that in every case marked improvement has resulted. This is, to say the least of it, rather remarkable, and more details of cases would be desirable. In hie paper he makes no reference to the possible abuses that might result were such a law to become general. It will be interesting to observe what happens in those American States where it is now in force after it has been in operation for some years longer. —Edinburgh Medical Journal.

Raising the Index of Resistance in Infections.

For the purpose of restoring vigor to an organism weakened through a pneumonia or a long continuing bronchitis and thus rendered easily susceptible to a tubercular infection, Cord. Ext. Ol. Morrhuæ Comp. (Hagee) possesses value of an easily demonstrated character.

In the preparation of Cord. Ext. Ol. Morrhuæ Comp. (Hagee), a process is employed which, while freeing the product from the obnoxious qualities of cod liver oil, retains the elements upon which the therapeutic and food value of the oil depends. This is a point which should be borne in mind in choosing a cod liver oil preparation for patients whose digestive organs are easily deranged

Of course, while it is in bronchial and pulmonary diseases that Cord. Ext. Ol. Morrhuæ Comp. (Hagee) has its greatest field of usefulness, yet its use should not be limited to these diseases alone, for its power as a tissue food insures results from its employment in all conditions marked by decline of strength.

Pneumococcus Peritonitis.

Lenormant and Pison report a case of primary pneumococcus septicemia, in which peritonitis was only an episode. The majority of cases of pneumococcus peritonitis are clinically primary, and most of those that are secondary result from a primary pleuro-pulmonary focus, the infection traveling directly through the diaphragm. There are, however, cases in which the peritonitis is an incident in a general pneumococcus septicemia.—Le Progres Medical.

The usefulness of good hypophosphites in pulmonary and strumous affections is generally agreed upon by the profession.

We commend to the notice of our readers the advertisement on page xiv of this number. "Robinson's Hypophospites" is an elegant and uniformly active preparation; the presence of quinine, strychnine, iron, etc., adding highly to the tonic value.

Arthritism and Anaphylaxis.

Galup defines arthritism as an anaphylactic diathesis caused by slight repeated intoxications chiefly of alimentary origin. Arthritism may be transmitted in the direct or collateral family line. It includes a large number of morbid phenomenar It manifests itself in definite modes of tissue reaction, such as nervous hyperexcitability, the responte occasionally to minimal causes, the paroxysmal character of the attacks, and their interchangeability in the same subjectr Other characteristics of this diathesis are the tendencies to congestions and to sclerosis.—La Presse Medicale.

The Significance of Children's Diseases in Insurance.

Grohman says that no special space is usually allotted to questions about children's diseases in application blanks, yet a history of these diseases is of great importance in judging an applicant. It is necesrssary to find out the specific affections from which he had suffered, for suspicious findings in the urine gain much in significance if a history of scarlet fever, for instance, has been obtained. On the other hand, partial deafness explained by inflammation of the middle ear in the course of scarlet fever, or scars in the neck following abscesses of lymphnodes during a similar illness in childhood, have much less significance than in case no history of children's diseases has been obtained.—Blatter fur Vertrauensurzte der Lebensversicherung.

Appendicitis in Children.

St. Dd.'s Green (in the London Practitioner), says during the last four years, threadworms were found in the appendix in three cases, of whom nine were children, that is to say, in about 31 per cent. of the children suffering from appendicitis. In some cases in which threadworms were found there was distinct ulceration of the mucous membrane at the site occupied by the threadworms; and the writer does not doubt that, in these cases, they are the direct cause of the ulceration, as they damage the mucous membrane sufficiently to reduce the power of resistance to the action of the bacteria present in the appendix. Probably in a certain number of cases of perforation with abscess, in which no concretions have been found, threadworms must have been the original cause. The threadworms are often found at the extreme

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end of the appendix and deeply buried in in the folds of the mucous membrane. As regards the indications for treatment of appendicitis in children, the author advises immediate operation in acute cases first seen within the first forty-eight hours. In acute cases first seen after the first forty-eight hours, (a) if the case is getting progressively worse, the pulse rate rising, the area of pain and tenderness increasing, and the tongue becoming dry, foul, foul and furred, an operation must be performed at once. (b) If perforation takes place and signs of general peritonitis develop, such as sudden and violent abdominal pain; small and frequent pulse, persistent vomiting, and general tenderness and rigidity of the abdomen, immediate operation is indicated. (c) If the symptoms and signs show that the disease is abating, the pulse rate falling as well as the temperature, the case should be watched, and any surgical treatment may be delayed until all signs of active inflammation have disappeared, that is, to say, until two or three weeks after the subsidence of the pulse and the temperature. The symptoms may at any time again become acute and require operative treatment at once. Cases in which an abscess has formed should be operated on as soon as this is discovered.

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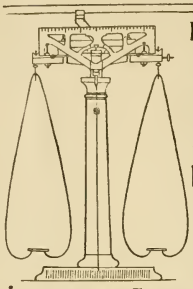
The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm names of Sander & Sons is illicitly appropriated, the make up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme court of Victoria at Melbourne, and others reported before in the medical literature, show that every physican should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Medical Treatment of Exophthalmic Goitre.—Hartenberg (Journal de medecine de Paris) the writer says that a combination of drug treatment with electrotherapy in this affection is advisable. The writer applies the galvanic current, at 60 to 80 milliamperes, to the thyroid every day, or on alternate days, for half an hour. The positive electrode should be a thick one, as well as broad enough to cover the lateral portions of the enlarged thyroid. The negative electrode is placed on the back in the lower dorsal or lumbar region, in order that the current shall be a decending one. The drug treatment consists of a cachet containing 0. 8 gramme of potassium bromide and 0.3 gramme of quinine sulphate, which is taken at each meal. Further measures and advice are obviously necessary for digestive troubles, menstrual irregularities, general weakness, etc. Followed for two or three months, this treatment causes a marked reduction in the size of the neck and of exophthalmos, a return of the heart rate to normal, not infrequently improved vision, and disappearance of psychic manifestations. In a number of cases the benefit obtained was permanent: in others, a tendency to recurrence showed itself, which, however, yielded readily to repeated treatment. As a prophylactic measure, it is advisable to prescribe one or two seances of electric treatment and a resumption of the cachets for a week in every month.

Obstetrical Charts in Colors.

Ten full plates 12x9 illustrating and briefly describing the following obstetrical positions:



1. Diameters of fœtal head, pelvic brim and planes of pelvis.
2. Head presentations.
3. Mechanism in vertex presentations.
4. Mechanism in left occipito-anterior presentation.
5. Face presentations.
6. Mechanism in face presentations.
7. Right mento-posterior position.
8. Breech presentations.
9. Mechanism in breech presentations.
10. Transverse positions.

These plates will be sent in book form to any address on receipt of 25 cts. postpaid.

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The Avorageous House Surgeon.

Langridge quotes the following anecdote related by Harrison Cripps; A patient swallowed a half-penny one afternoon and next morning the house-surgeon on examing him extracted this halfpenny from the rectum. It had passed down without much trouble, but had been unable to pass the rectum. This was the case in which the house surgeon got into trouble with the lay governing body of the hospital. He was charged with having extracted a fee from an out-patient. But as the amount in dispute was small he thought he had better hand it over to the hospital authorities to ovoid prosecution.—The London Clinical Journal.

The CHARLOTTE SANATORIUM

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The attention of the physicians and surgeons is called to the advantages which this institution offers in methods of laboratory diagnoses.

Many physicians through lack of time, technical training or laboratory equipment find it difficult to utilize the many methods of microscopic and clinical examinations so essential to a proper diagnosis.

To the physicians and surgeons of the Carolinas and Virginia, the Charlotte Sanatorium Laboratory offers, at moderate cost, facilities for such examinations. Animal inoculation, chemical, bacteriological and histological examinations will be made as the case requires.

The Main Building Front View.

The following directions are suggested for the benefit of those who may forward material for examination.

All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.

Seventh Street Entrance.

The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test. — After carefully washing, prick the lobule of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and allowed to dry without being spread out on the suface of the slide. After they have dried, the

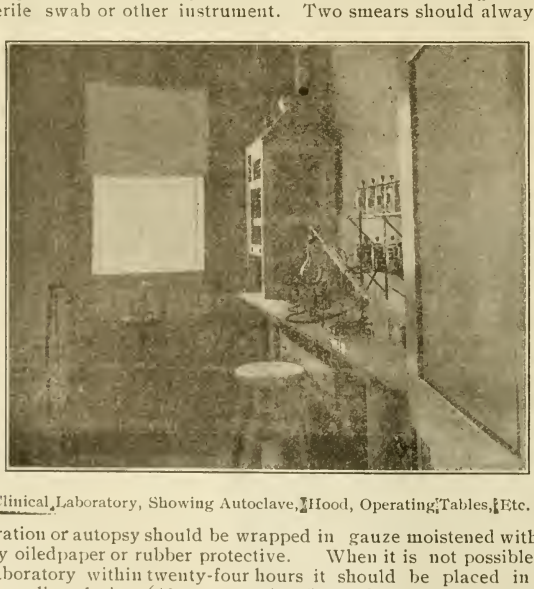
slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

Second Method.—Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count. etc., should be sent to the labaratory on glass slides. As thin a smear as possible should be made.

Clinical Laboratory, Showing Arrangement of Desks, Miscroscopes, Microtomes, Incubator, Centrifuge, Etc

Smears For The Detection of Gonococci.—One drop ofpurulent discharge from the urethra should be placed at one end of a clean slide and a thin smear made overthe surface of the slide.

In collecting a specimenf rom a female patient,care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a terile swab or other instrument. Two smears should always be sent to the laboratory.



Clinical Laboratory, Showing Autoclave, Hood, Operating Tables, Etc.

Urine.—for bacteriological examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15 20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlich's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological.—material from either operation or autopsy should be wrapped in gauze moistened with salt solution surrounded by oiledpaper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and thematerial from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They should rest upon a pad of absorbent cotton, which is placed in thebottom of the jar befoer

he tumoris dropped in

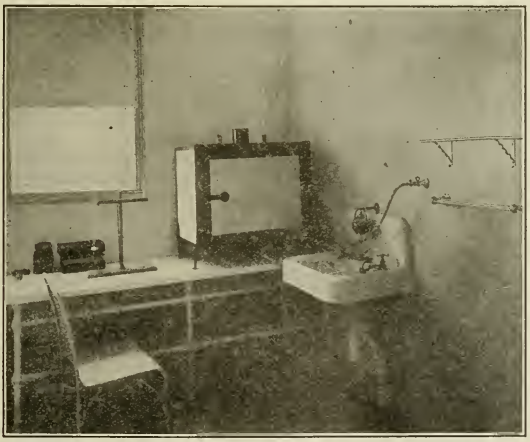
Feces.—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

Wasserman's Test.—Since the advent of the discovery of 606 for the cure of Syphilis. the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.

(Clinical Laboratory, Showing Supplies, Working Table. Etc.)

Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourinquet applied, taken the blood from the vein by means of the syringe.



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2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourinquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohollam , or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tude, allow to coagulate, cork, pack and mail as any other fraigle package. Atleast two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk.—The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents.—should be sentin a sterilized bottle. Alarge vaseline or quinine bottle usually answers the purpose.

Fig 1.

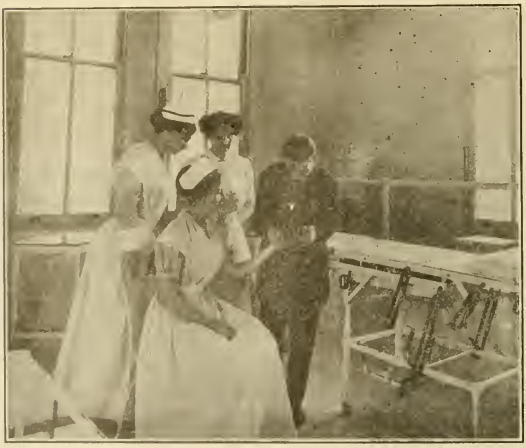

Fig 11.

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Microscopical ... 1.00
Complete analysis 1.50

Pathological Sections......5 00

Feces Examination 2 00
Blood Culture ... 5.00
Cultures and isolation of bacteria..... 5.00
Stomach Contents2.00
Widal Test..... 2.50
Tissue Sections.. 5.00
Tuberculin Test 5.00
Wassermann's Test 10.00

Milk.

Chemical 2.50
Bacterial 5:00
Water analysis, bacterial examination.. 5.00
Chemical examination including alkalinity, chlorides, ammonia, nitrites and nitrates ...5.00
Quantitative analysis ..... $10.00 to 25.00
Culture Media (per tube) ..... .25
Sterilized tubes and pipettes ..... .15
Coagulation time 2.50
Vaccines..... 10.00
Sterilized Tubes with swab .....50 Bacterial Cultures 1.00 Sterilized solution.. 5.00 Spinal Puncture and Analysis 5.00

Address all specimen to the Charlotte Sanatorium Laboratory, Charlotte, N. C

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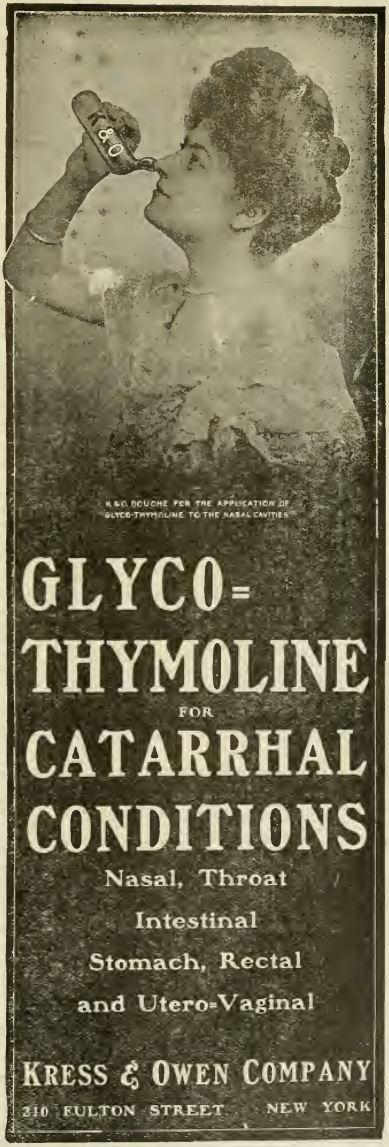

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Philadelphia, December 27th, 1912.

Charlotte Medical Journal,

Charlotte, North Carolina.

Dear Sir:—

The following extract from an article—The Negro and his Health Problems—By J. Madison Taylor, appearing in the Medical Record of September 21st, 1902, has excited a degree of unfavorable critiscism from different sources, which contend that the amputation in not fair to the Negro Race. "An important observation made by several Southern Physicians is to the effect that sexual lawnessness resulting in lynchings, is to be explained thus:

The male negro is nearly always infected with gonorrhea. He neglects treatment habitually. Chronic prostatic irritation ensues. Thus sexual impulses frequently become overmastering. Alcohol particularly inflames this state and likewise dethrones reason; hence the first female he meets he is tempted to assault. This if often a white female; thereupon the fury and vengenence of white men are excited and disastrous results follow to the negro."

The idea of the comparative prevalence of gonorrhoea in the Race is a generally accepted statement among Medical Men of the North, but I have been unable to verify it by any statistics or other authoratative sources. May I ask you to bring this matter editorially before your Subscribers asking for contributions on the subject. An answer to the following questions may be of assistance in getting at the pith of the matter.

In your personal Medical experience as compared with the White Race.

1. Is gonorrheal urethritis more prevalent among the adult Negro male population?

2. Are its sequelal pyosalynx, pelvic abscess etc., more common among the adult female Negro population?

3. In the proportion of gonorrhoeal opthalmia greater among the Negro Newborn?

4. Is the disease more prevalent among the city or country negro population?

5. Is the disease as virulent in the colored race?

6. Is chronic gonorrhoea and its sequeled, gleet prostatitis and seminal vesiculitis more prevalent in the Negro Male?

7. Is this condition responsible for the sexual lawlessness mentioned in the previous quotation from the article of "Dr. Taylor."

Realizing that you will appreciate that fairness and not predjudice is instrumental in instigating the above inquiry, I hope that you through your Journal will assist us in answering the question.

Very truly yours,

Wm. A. Steel, M. D.

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A New Specific in Rheumatism.

Melubrin acts as a practical specific in articular rheumatism, according to reports of some of the leading internists of Germany.

Hoppe of the Berlin General City Hospital (Berlin Klin. Woch., 1912, No. 22) says that as an anti-rheumatic it stands close to salicylic acid in efficiency and is far more acceptable. Melubrin's absolute freedom from toxicity especially commends it to Hoppe's mind.

Muller of the Deaconness Hospital, Halle, (Vienna Klin. Woch., 1912, No. 25) remarks on the particular value of Melubrin is acute and chronic rheumatic polyasthritis. He also commends it as an antipyretic, especially in pneumonia and sciatica, as its use is not attended with the disagreeable itching and perspiration caused by other antipyretics.

Samples of Melubrin will be sent physicians by the Farbwerke-Hoechst Company, 34 Beach Street, New York.

A New Urinary Antiseptic.

Amphotropin, or hexamethylenetetramine camphorate, is an efficient internal urinary antiseptic, now being introduced to the American medical profession by the Farbwerke-Hoechst Company, 34 Beach Street, N.Y., which will send samples to physicians.

Dr Eugene Remete (Pester Med. Chir. Presse, 1912, No. 11) says that Amphotropin reduces abnormal micturition in subacute and chronic conditions, increases diuresis, particularly in pyelitis and pyelonephritis, removes sloughing epithelium, increases urinary acid reaction, has a solvent action on uric acid and kills species of bacteria, against which other urinary disinfectants are helpless.

Hediosit C7 H12 O7.

A pleasant tasting nutrient and sugar substitute for diabetics is being presented to physicians by the Farbwerke-Hoechst Company, 34 Beach Street, New York, in the form of Hediosit, a chemical compound, which is meeting with much favor in Europe.

It is easily oxidized by the worst diabetic cases and is utilized as food. In addition, it possesses the unique property of considerably reducing the excretion by diabetic patients of the sugar derived from other sources. There is no increase in glycosuria, even in the worst cases, and ordinarily it is greatly reduced.

Hediosit is an important adjunct to the dietetic treatment of diabetes and offers great relief to the sufferer.

A Severe Burn.

My first use of Antiphlogistine in burns and scalds was accidental. I was called by telephone to Mr. J. T., aged twenty-seven, weight 280 lbs., brick-maker, a steam-pipe having exploded between his legs, scalding him badly. I ordered that no grease of any kind be used, but that cloths soaked in a strong solution of bicarbonate of soda should be laid on the parts till I could get there. I stopped at a drug store to procure another [illegible]ve I had used in such cases, and by mistake the clerk gave me two boxes of Antiphlogistine. When I reached my patient I found him suffering intensely with a big blister extending from the crotch to the ankle on the inner side of both legs, at least three inches wide and surrounded by a red inflamed surface two inches wide on each side.

I had used Antiphlogistine before in pneumonia and in sprains, so when I found that by mistake this had been sent I decided to try it. I covered the entire injured parts with a thick layer of Antiphlogistine (applied cold), put absorbent cotton over all, and after bandaging loosely to keep things in place, took Mr. T. home in my buggy. When I first saw him his face was contorted with pain and he could not suppress the groans that the agony wrung from him, but, as I covered more and more of the burnt surface with the dressing, I could see the expression of pain leaving his face. I gave him some medicine to relieve pain and when I called again that evening I found he had not touched the anodyne. I asked him why he had not touched his medicine. "Well, doctor," he said, "you told me to take that every two hours while I was in pain and I have not had any pain."

The next day I let him leave his room and in three days he was back at work. I did not touch the dressing for five days, and when I took it off the parts had healed entirely.

There are two important points in the use of Antiphlogistine. First: put it on thick, thick, thick, using it hot for internal inflammations and cold for burns and scalds. Second: never put cloth over the Antiphlogistine, except a thin layer of gauze, if necessary, but put absorbent cotton in thick layers over your first dressing. Don't try to remove it as long as it sticks to the skin for it will let go as soon as it has done its work. I have used this preparation (Antiphlogistine) frequently since then in severe burns and scalds and yet have to meet my first disappointment in its curative power. —H. B. Lee, M.D., Summerville, S. C.

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Surgical Tuberculosis.

By L. Sexton, B.S., M.D., New Orleans, La.

Usually when we speak of tuberculosis, one naturally associates the disease with the lungs, but there is a surgical side of the disease which is just as interesting to deal with from the surgeon's standpoint, as is pulmonary tuberculosis to the internist. In a short article as this must needs be, we shall only allude to a few of the most common forms of surgical tuberculosis amenable to operative treatment and its differentiation from other diseases.

The tubercular abscess is one of the most common surgical conditions with which we have to deal. They are sometimes designated as chronic, congestive or cold abscesses, these are devoid of the acute inflammatory process of the ones caused by staphylo- and streptococci. These abscesses are likely to occur wherever the tubercle bacilli may be deposited and are consequently in the lymphatic glands, joints and bones more than in other portions of the body. They are the result of the breaking down of the tuberele bacilli which may be accomplished without either pain or acute inflammatory processes. If these deposits of tubercles happens to be under some dense aponeurotic membrane as the psoas (as pus moves in the line of least resistance) it may follow these fascial planes and come to the surface on the anterior aspect of the thigh or above or below Pouparts ligament, when it originally started in the lumbar vertebræ as in psoas abscess. The same source of infection may be the cause of our ischiorectal or perineal fistula.

The treatment of an abscess tract of such far reaching dimensions has been attempted by opening and washing out the tract with weak solution of tincture of iodine or 1 to 5,000 bichloride of mercury, following the injection of the tract with a bismuth vaseline paste after Beck's methsd, 1 to 3 in warm liquid form, so as to fill up as nearly as possible this pyogenic sac. The great danger in the treatment of such cases by the open method is the adding of strepto- and staphylococci infection to the tubercular, making it a mixed infection which is very exhausting and depleting to the patients strength.

When an evacuated tubercular abscess continues to suppurate and remain open for long periods of time, it is because of this mixed infection of strepto- and staphylococci being introduced into the wound.

Joints and their membranes are liable to tubercular infection. The knee is more frequently infected than the other articulations, supposedly on account of so much joint surface being exposed to trauma and the large number of lymphatics and blood vessels in the knee joint. The synovial membrane and osseous structure are involved in about equal proportions. The starting point in the bone variety is usually in the head of the tibia or femur; the joint may become ankylosed with the tibia in the flexed and externally rotated position.

Tubersular disease of the joints is secondary to that of the lungs, bowels or lymph glands in nearly all cases. This metastasis is effected through the blood streams and lymphatic vessels; it is very slow in its process, usually confined to one joint and quite often seems to follow some injury to the joint. It is just as essential for a patient with tubercular joint disease to require rest, open air and forced feeding as it is for those patients suffering from the pulmonary form of the disease.

As these cases very often occur among the very poor, *changing to a dry climate*, or at least dwellings, occupation and environment becomes necessary to the successful management of the case. Tonics, of which the hypophosphites, creosote and arsenic form a part, concentrated fresh foods, long hours of rest in the open are indispensible to any surgical proceedure we may choose to adopt and such diseased joints have been injected with iodoform emulsion, five per cent. formalin in glycerine, and many other injections of like nature, all with a view of destroying the bacilli in situ. Immobilizing the joint by *Thomas' splint* in such a way as to permit the patient to move around upon crutches after such an injection has been made, is about the latest suggestion in the treatment in such cases. For the purpose of immobilizing, we know of nothing better than a thin cast of plaster of Paris around the knee, reinforced by thin bands of steel or aluminum. Two nicely woven woolen stockings come in very handy next to the skin. The cast should be renewed after a month or two, or when the swelling so recedes that the cast does not exert any pressure upon the joint.

Tubercular *coxitis* has the same pathology as in other joints. It is first noticed in children by their standing on the sound limb in order to rest the other, and in adults by a severe hip lameness the next day after

any violent exertion. In its first stages the motion of the joint is very little impaired. There may be evening temperature, the gluteal muscles perish away on the affected side as the disease progresses. The pain may be reflected to the knee joint, as the anterior crural and sciatic nerve supply both joints. The limb may appear lengthened, a blow on the heel or on the trochanter causes pain. The limb becomes flexed, abducted and everted. As the disease progresses the spinal column becomes fixed with a lateral curvature, the convexity toward the diseased hip. The socket is increased in size by absorption, the pelvis is raised on the affected side, producing marked shortening with inversion of the affected limb. If the joint should abscess it usually opens internal to the great trochanter or passes directly backward into the gluteal region.

Whenever there is *pain in the knee* the hip joint should be carefully examined; flexions to right angles of the legs, abduction and eversion means that the disease is in the knee and not a reflex pain in the hip.

The most helpful condition for any tubercular joint is to be at *perfect rest*. Any two tubercular infected bones with friction against each other in the process of walking or manipulation of any kind aggravates the condition, spreading the tuberculous infection. Nature tries to throw up barriers against this infection of new territory by the tubercular bacilli, but all of natures' efforts come to naught unless the joints affected are kept at absolute rest and the two ends of diseased bones practically being pulled apart. This is equally true whether the infection is *Pott's disease* of the vertebral column or hip or knee joint tuberculosis. The best mechanical means for bringing about this absolute position of rest in Pott's disease is the well applied plaster of Paris jacket, which has for its resting point the brim of the pelvis and for its support the back and axillary space. Application of these plaster jackets should only be made when the patient is suspended from a tripod by the axila and head so that the vertebra are pulled apart by the weight of the body and lower extremities. A double closely fitting knit undershirt should cover the entire surface of the body snugly, all boney prominences should be padded. The first rolls of the plaster dressing should be applied during forced expiration so as to insure its fitting snugly and supporting the vertebral column as it should. A loose fitting jacket that could be turned around on the body is a hindrance rather than a help. It requires some practice in the use of plaster to use these dressings for Pott's disease of the spine and the doctor who, without previous preparation and study of the case, attempts to apply these dressings may find that he needs the assistance of an expert in order to bring out the full benefits of the treatment. While the bandages are being applied, which have been previously rolled in the plaster of Paris, wet in salt water, wood, aluminum or steel strips may be applied on either side of the *spinal column*, extending the full longitudinal length of the plaster jacket. All boney prominences should be well padded with absorbant cotton and the patient should be kept quiet for a couple of hours after the dressing has been put on in order that no cracks may occur in the bandage. The bed should be located on the gallery or near an open window in all except the most inclement and coldest weather. The patient should be encouraged to eat the most nourishing food, small in quantity and often repeated so that the very best chance for recovery can be obtained.

These dressings and applications need renewing *as they loosen* or fail to perform the duties for which they were applied and the plan of treatment may have to be continued for a year or more in the most persistent cases. It has been discovered that unless a joint cavity is actually broken down and contains pus that this plan of treatment has given better results than the method of injection of joint cavities with formaldehyde, iodoform or any of the other emulsions which have been suggested for these cases. Should a joint fill with pus the rule is invariably to let it out and drain. Where the joint cavity and ends of bone are entirely destroyed a re-section may become necessary, but cases that have been treated by rest and extension from the earliest rarely reach this stage.

The hip joint which is the next most frequently involved in tubercular infections is amenable to treatment in the same way as the knee, having the light cast to extend far up above the pelvis and down the leg so as to immobilize the knee. In treating the hip joint a Levis or some *extension* apparatus should be fixed to the foot and leg, adhesive straps held to the inner and outer side of the thigh by a roller bandage. To these adhesive straps a five to ten pound weight should be attached; the foot of the bed raised for counter extension so as to pull apart the diseased surface in the joint; if this extension is kept on all night, so much the better.

Buck's or Liston's splint may be used as in fracture of the femur as an alternating treatment with the application of the cast; the bed *should be made firm*, as in fracture bed, by wide planks being inserted between

the mattresses in order to use sand bags if necessary to prevent deformity and correct the flexion of the knee; the limb, if possible, should be kept in the horizontal position. The advantage of the *Thomas hip* splint is that the patient can get out in the fresh air, which is as essential in the hip as in lung tuberculosis. If abscesses form and can be thoroughly aspirated and injected with the iodoform emulsion or with the 2 per cent. formaldehyde and glycerine solution we loose some of the risk of mixed infection. Operative measures about the hip joint are more serious in their consequences than in other tubercular joints of the body. The last recommendation in extensive abscesses and destruction of the joint membranes, where operative is imperative, is to remove all the diseased bone, mop the cavity with carbolic acid followed by alcohol, or with strong tincture of iodine, packing with iodoform gauze, to be removed within a week or sooner, allowing the wound to heal by granulation. Ten per cent. solution of nitrate of silver applied followed by Beck's paste has been injected into tubercular sinuses leading down to the joint.

X-raying such joints and fistula as are treated in an institution where it is convenient is recommended by the best authority, as is also minute doses of tuberculin combined with the above mentioned methods.

Surgeons are arrayed in about equal proportions for and against the injection of tuberculous joints with iodoform or formaldehyde solution and with our limited experience we shall not try to arbitrate the matter for them. It is perhaps true that many of these cases that have recovered after injections, would have made equally favorable progress with immobilization, forced feeding and hygienic treatment out of doors.

In tapping a tubercular joint a rather *blunt trocar* should be used which should be inserted through a slit in the skin some distance from the joint to produce a valve-like opening and to avoid the introduction of any germ imbedded in the skin. Abstract as much of the fluid in the joint as the amount of emulsion to be used; do not break up adhesions by unnecessary manipulation of the joint; do not burst the capsule by forcing in too much of your antiseptic solution. Five injections two weeks apart is usually sufficient. A wide Esmarch bandage and a tight roller bandage applied around the joint just after the needle has been withdrawn prevents hemorrhage. The Beer method of treatment has been tried in these cases.

In addition to the valve-like opening in inserting the trocar, do not injure joint surfaces by scratching them with the point of the needle. A strong rubber tube over the end of the needle into which the nozzle of the syringe is inserted enables us to allow the emulsion to flow into the joint by gravitation, provided the plunger is removed. The rubber tubing yields when pressure is put on the syringe, producing less force in using the injection. The pain after an injection into a joint may be relieved by elevation, rest and hot water bags, or codeine if too severe.

Tubercular testicles between the ages of twenty and forty are not very uncommon, secondary manifestations of the disease. Trauma to the testicle or epididymitis predispose to tubercular infection. Fistulous tracts or tubercular abscesses commonly follow unless an early castration is done, as the physiological function of the testicle is early destroyed after the involvement of the organ no loss of manhood results from castration.

Tuberculosis of the kidney is found in about two per cent. as a secondary manifestation of the disease. In 3500 autopsies only twenty-four cases were of renal tuberculosis and these were all of secondary involvements. The disease usually being unilateral suggests nephrectomy, provided climatic and hygienic treatment do no good. Removing the kidney should never be done, even with a moderate amount of pulmonary involvement, provided both organs are involved.

Tuberculosis of the breast is a very rare disease; the breast seems to be involved secondary from lungs through the blood and lymphatic vessels. Cold abscesses of the breast are usually tubercular in origin, the glands in the axilla enlarge just as they do in carcinoma; the abscess is usually painless, the bacilli are few in number in the pus, in fact, may not be found. Usually these cold abscesses of the breast are relieved by simply opening, mopping out with tincture of iodine and packing with iodoform gauze; if the disease is extensive throughout the breast, complete amputation should be done if the patient is in moderately good health and there is no serious pulmonary involvement.

The postoperative treatment in every tubercular case should be either change of climate or absolute out of door rest, forced feeding, the same as is practiced in first stage cases with only pulmonary involvement.

The Ancient and the Modern Doctor in Connection with the Advancement of Medical Science.*

By R. Armfield, M.D., Marshville, N. C.

How much we have improved in the Nineteenth Century I am not able to tell. In some respects we have improved a great deal; in other respects we have retrograded.

Medicine must necessarily begin with the written history of events. Its earliest endeavors need detain us but a very short time. Its earliest period is enveloped in profound obscurity, and so mingled with myth and fable as to be very uncertain. It embraces an indefinite time, during which medicine was not a science, but an undigested collection of experimental notions, vaguely described, disfigured by tradition and often made inutile by superstition and ignorance.

The earliest records of probable authenticity are perhaps to be met with in the Scriptures from which may be gathered here and there a fair notion of Egyptian knowledge and practice. Thus we read that Joseph commanded his servants and physicians to embalm him, this being about 1700 before Christ. It shows that Egypt at that time possessed a class of men who practiced the healing art, and that they also embalmed the dead, which must have both required and furnished a crude idea of general anatomy.

Aesculapius was the leading character in medicine of all the Ancients, with the possible exception of Hermes among the Egyptians; in fact some scholars considered the two identical Temples were erected in his honor, Priests were consecrated to them, and schools of instruction were there established.

The followers of Aesculapius, and the Priests in the Temples dedicated to him, soon formed a separate cast, transmitting from one to another, as a family heritage, their medical knowledge. At first no one was admitted to practice the sacred Science unless he joined the Priesthood, although later this secrecy was relaxed. They initiated strangers, provided they fulfilled the test which they made. Some kind of medical instruction was given in each Temple. The three most celebrated Temples to Aesculapius was that of Rhodes, already extinct by the time of Hippocrates; that of Cnidus, which published a small repertory; and finally that of Cos, most celebrated of all because of the illustrious men who emanated from this school.

Now we come to the age of Hippocrates. This central figure in the history of Ancient medicine was born on the Island of Cos, of a family in which the practice of medicine was hereditary, who traced their ancestors on the male side to Aesculapius, and on the female side to Hercules. The individual to whom every one refers under this name was the second of seven; the date of his birth goes back to 460 Before Christ, but of his life and his age at death we do not know; some say he lived to be over 100 years of age.

It is certain that he traveled widely, since his writings evince the knowledge thus gained. He was a contemporary of Socrates, although somewhat younger, and lived in the age of Pericles, the golden age for Science and Art in Greece. The Island of Cos is now called Stan-Co and is situated not far from the coast of Ionia. For merely it was considered as having a most salubrious climate; now that it is under the Dominion of the Turks, it is considered most unhealthy.

It possessed a Temple dedicated to Aesculapius and a celebrated medical school. But Hippocrates, not satisfied with what he could learn here, visited the principal foreign cities; and seems to have been a most accurate and painstaking observer and collector of notes. That he achieved great renown in his life is known, since Plato and even Aristotle refer to him as their authority in very many matters. Hippocrates wrote at least three treatises concerning hygiene; the first, on airs, waters and places; the second, on regimen; the third, on salubrious diet. Nearly all the scholars of these centuries had received instruction in the schools of Cos and Pergamos. The principal reason for its eminence in medical instruction was the practice of dissection of human bodies, which under the Ptolemies was allowed and recommended, and by which the science of medicine received an extraordinary impulse.

Although the prejudice of the Egyptians was very strong against those who touched a dead body, the Ptolemies themselves are said to have participated in this kind of anatomical study, thus destroying by their example the odium previously attached to dissection. Strange to say, however, the practice of dissection fell into disuse toward the end of this anatomic period, and scholars preferred to indulge in subtle metaphysical discussion rather than study human tissues. But the principal reason for giving up this practice was the Roman Dominion of Egypt, the Romans, inconsistently, being perfectly willing to see any amount of blood shed in the arena, and all sorts of inhumanity practiced upon all human beings, but holding that compact with corpse was profanation; so that not a single anatomist of reputation had his origin in ancient Rome.

*Read before the Seventh District Medical Society at Wadesboro, N. C.

"If on any occasion," says Renard, "a foreign physician atrached to the King or General desired to avail himself of the occasions that were afforded to examine the structures of the internal parts of the human body, he was obliged to conceal and carry off during the night some body abandoned to the birds of prey." To complete the melancholy termination of the anatomic period. The labors of the writers of those days were all lost by the burning of the great library by Julius Caesar, which was the beginning of the chain of disasters with which Egypt was accursed under Roman Dominion. Although Mark Anthony, induced thereto by the endearments and the solicitations of Cleopatra, transported the library of Pergamos to Alexandria, even this was unavailing to restore the position of the school since the atrocious imbecile Caracalla took from the pensioners of the museum their privileges of common residence and every other advantage, and suppressed all public exhibitions and discussions.

I can mention but few of the names most eminent during this anatomic period, and but a short account of the life and works of each.

It seems while the Ancients were more deficient in medical knowledge they were more efficient in literary attainment than the modern physician of today as is evidenced by Galen. One of the students of Hippocrates Dogmatism, the most earnest, skillful, and learned was Claudius Galen, a native of Pergamos, a place already celebrated for its Temple dedicated to Aesculapius, for its school of Medicine, and for a library which had been removed to Alexandria. He was placed by his father under the most distinguished teachers in all of the sciences, and even as a young man showed extraordinary progress, and became early a disputant with the most erudite in grammar, history, mathematics and philosophy.

Arabian medicine constitutes the most interesting chapters in the history of our art. An offspring from Greek schools, it was for nearly one hundred years the foster mother of that art, and although it gave rise to no great discovery nor wonderful step in advance during all this period, it nevertheless kept alive all the learning of the past, and clarified rather than made it turbid. In the sixth century the Nestorians, (followers of Bishop Nestou) having been driven out of Syria, settled in Persia, Mesopotamia, and Arabia, and there founded schools and other institutions such as they had had at home, schools in which besides the ordinary philosophic students, medicine received a share of attention. Thus it came about that by the seventh century Arabian physicians were everywhere known and in high repute.

Naturally the basis for their studies embodied the writings of Hippocrates, Galen, and Oribasius, and Pane of Aegina; and the first Arabian works consisted solely of translation from the Greek, first out of their Syrice rendering, and later from the original. Indeed, so much eminence was finally achieved by Arabian physicians that more thah 400 years are known by name as Authors.

Albucassis was born in Zahra, near Cordovia, about the beginning of the eleventh century, and is supposed to have died A. D. 1122, and at the advanced age of 101. He was the author of an abridgement or compilation, devoted to the practice of medicine, the only novelty of which is a small portion devoted to surgery, in which are described certain instruments.

He says: "I have detailed briefly the methods of operation; I have described all necessary instruments, and I present their forms by means of drawings. In a word, I have omitted nothing of what can shed light to the profession. But one of the principal reasons why it is so rare to meet a successful surgeon is that the apprenticeship of this branch is very long, and he who devotes himself to it must be versed in the science of anatomy, of which Galen has transmitted to us the knowledge. In fine, no one should permit himself to attempt this difficult art without having a perfect knowledge of anatomy and the action of remedies."

Not a word is said about dissections, however, from which we conclude that they were not tolerated in his time. He resorted enthusiastically to the cautery, and recommended it in spontaneous luxations and the commencement of curvature of the spine. He refers particularly to instrumental delivery and the extraction of the after-birth, and when speaking of fractures and dislocations, he remarks: "This part of surgery has been abandoned, for which reason it has fallen into undeserved contempt."

During this epoch many modifications were introduced and improvements made in the teaching of medicine. Permanent amphitheaters were established for dissection, and chairs of anatomy created, their incumbents being paid out of the public treasury. The Popes appear to have taken the initiative in this respect, which accounts for the great number of subjects with which Eustachius was supplied, as compared with Vesalius, who obtained only two or three in a year.

Up to this time the razor had been the sole instrument of dissection, but was now replaced by the scalpel, which remains in use today. By the labors of the few men

mentioned anatomy acquired a degree of perfection which it had never attained under the Greeks.

In the history nf medicine certain family names of itinerant operators have been preserved, for example, the Branca, the Norsini in Italy, and the Colot in France.

Under such conditions there could be no such thing as profession of the surgeon. The prejudice against dissection did not begin to abate until the thirteenth century, when a very few of the Clergy dared, in a very timid manner, io perform surgical operations. Their numbers increased in the course of the fourteenth and fifteenth centuries, and in the sixteenth had become considerable. Most of the great anatomists of that period, such as Fallopius and Fabricius' were great surgeons.

In due time it came about that while the clerical physicians were willing to descend to the ranks of operators, the lay-surgeons aspired to the ranks of Doctors of Medicine.

This transformation took place especially in France, the only country where at that time there was a special college of surgeons —the small Brotherhood of St. Come, already alluded to, which was always contending against the faculty on one hand and against the Barber-surgeons on the other with varying results. They at last sought peace with the University and were received by it. This took place in 1515, and was the renaissance of surgery, not only for Paris, but for the whole world. By this reunion the faculty acquired authority over the barbers, who were admitted to their lectures and took courses in anatomy and surgery, gradually attaining a knowledge which entitled them to be called Barber-surgeons. Their rights were not curtailed, but made more difficult of procurement, for, in addition to passing their initiation for the privilege of becoming Barber surgeons, they also had to pass an examination before the physician and the two surgeons of the King at Chatelet for the right to practice surgery.

The surgeons, as the price of their submission to the faculty, had beside the University privilege, a sort of supremacy over the barbers; and thus it happened that the barbers were admitted to the rank of surgery at St. Come, and that the surgeons of St. Come were admitted as barber-surgeons by the faculty of medicine. In this double capacity they approached nearer the profession of medicine from which they should never have been separated, while surgery became an art which received numerous improvements.

The most colossal figure in this collection of mediæval charlatans and knaves was Paracelsus. He was born in 1493, near Zurich, of a well-to-do family, his father being a physician. He had a good preliminary education, and then visited the various Universities, or rather University towns. But instead of listening to the Professors, Paracelsus associated with clever women, barbers, magicians, alchemists and the like from whom he acquired much information. He was led at once to the vagaries of caval, and according to his own statement, he did not open a book for ten years. He neglected his studies and forgot his Latin, so that he became incapable of expressing himself in that language. From the age of 25 he became a hard drinker, and this habit ultimately worked his ruin. One of his Disciples says of him that during the two years which he passed with him he was so inclined to drinking and debauchery that he could scarcely be seen for an hour or two without being full of wine, although that condition did not prevent him from being admired by every one as a second Aesculapius.

One of the best known London surgeons was Percival Pott (1749 to 1787), who became especially eminent through his studies upon hernia, spinal disease, and diseases of the bones and joints; his complete chirurgical works appeared in London in 1771.

The ablest French anatomist of the century was Winslow (1669 to 1760), a man of Danish birth but who became a Professor in Paris, and is best known by Foramen name for him.

Brown, while his system consisted of an endeavor to make a diagnosis by watching the effect of drugs. Bleeding was held to be the best measure; if it did the patient good, the disease was asthenic; if it made him worse, the asthenic was certain. He gave enormous doses of powerful drugs, 60 grains of gamboge, and from two to three ounces of saltpeter in a single day. Is it strange that homeopathy or any other heterodox system sprang up in the midst of such measures? It is an old saying that there is no folly which will not secure a following; and strange to say Rasori had a numerous and an eminent one.

As just intimated, homeopathy was the natural recreation against such heroic measures; in the rebounds the other extreme was reached even to practical therapeutic nihilism.

Now, instead of venesection and drastic medication, came the theories expounded by Hahnemann (1753 1843) which denied disease, admitting only symptoms. This Apostle of homeopathy was the son of a porcelain painter in Meissen. He studied in Leipzig and was in Vienna and later practiced in various cities, including Dresden and Leipzig.

"Similia Similibusecurautur." Was not with him, as it long before had been mutilated by Hippocrates, and later by Paracelsus. Of the life and labors of Ahnemann, much might be told, but this is not the time or place to go into the subject.

Theodore Billroth, who only within a few years joined the great silent majority, was for many years the surgical sun of Austria-Hungary, around whom revolved all the other lights of the profession in the empire. He was as expert with the microscope as with the knife, and equally great with both.

Although his great and elaborate work on Coccobacteria Septica is now obsolete it nevertheless marked an area in surgical pathology, as does also his text book on the same subject, which reached fifteen editions and has been widely translated.

Modern Surgery and Medicine.

Surgery of the nineteenth century has made wonderful advance, though medicine and medical diagnosis is on the retrograde and medicine as I see it is losing its tone. It is as it seems to me bordering commercialism, also imperilism. The American Medical Association, with a few others, maybe seven, revised the United States Pharmacopœia. Those seven men dictated what every physician should use, or at least what percentage of strength the drug he uses should be, ignoring the collegiate training he might have had and with no excuse whatever than that he might give an overdose. I think this very presumptive for seven men to dictate for every doctor in the United States. Just as well kill a man by commission as by ommission. Look at the hardship it worked; for instance, if we want to give a dose of aconite by the old standard we must specify the old, also the same by the new standard. If the druggist has not both on hand he is bothered to compound it. If a man is dying with cramp colic this has an inkling to me of dictatorship. Then another thing: you can pay $5 per annum for the Journal of the American Medical Association and have a membership in the Association. They don't care a cuss for your membership so they get $5 for a paper worth $2.

I like medical journals and read them, though I don't know just how much good they have done. If a man has judgment of his own and does his own thinking, it is alright to read them; if not he had better never seen one. I know a great many doctors today practicing medicine only by what they see in medical journals, loaded down with medicine case, and pockets with Dr. Hinkle's, Dr. Doan's and Dr. Everybody's pills and tablets. At the same time if some of those pills have something in them the Dr. does not want the patient has to gulp it down. A lot of those men could not write a compatible prescription to save their life, and the life of the patient.

Read medical journals and think. Be men, don't wait for some one else to do your thinking. Read what other men think, and think for yourself and be yourself. Look for a moment at Dr. Woodbridge's treatment for typhoid fever. He once came near revolutionizing the United States. The Government sent car-loads of the stuff to Havana. Now who would dare treat after the Woodbridge treatment. A doctor once asked me if I treated after Woodbridge. I told him no; enough of my patients died after Armfield's treatment.

Another instance is the Baruch Hydrotherapy. This form of treatment outside of hospitals has killed more people than fever and pneumonia. I dare say there are not more than three families of ten in North Carolina that can carry out that Baruch treatment. They haven't the means nor the judgment. Medicine has become too speculative or too politic, or both. I am afraid there are too many called and too few chosen. When you see a man joining the great medical army for just what he expects to get out of it, or goes whining around telling every poor white man and negro what he can do, and how much he has learned, and gets his friends to speak a good word to some lady expecting to be confined, and when asked about a brother doctor's proficiency will say I had rather not say myself though you ask so and so, why that kind of man is no more fit to practice medicine than a cow is to set type.

Then we have another modern doctor who is always looking out for notoriety, office-seeking, studying more politics (medical) than medicine. I am sorry to say the Medical Society is degrading itself. This particular committee business of a few running the machine will ultimately run it in the ground, and it is not always the one that wants the office worst that is the most proficient. One other character, then I have done. This is the consulting of one doctor with another. It is a pleasure to consult with a medical gentleman when we are looking to one common end, the good and relief of the suffering man or woman. Though to meet one of those above spoken of, one that will walk in with all the pomp of the God of Medicine, kick you aside, make suggestions before the family, then wait until the principal doctor is gone, yet make suggestions to the family, and I have known some even to write prescriptions.

In conclusion, I never knew one of the ancients to proselyte the medical profession to the extent of being a criminal abortionist.

Nor to receive bribes from life insurance companies, so after all I don't know how much we are ahead of the ancient brothers after having the path first blazed out by them.

One advance in medicine is hookworm and its cure, and tuberculosis, and I think if Carnegie and John D. Rockefeller's money hold out there will not be a man, woman or child in the United States of America that will be free from either tuberculosis or hookworm.

Uses of Apomorphine.*

By R. B. Epting, M.D., Greenwood, S. C.

Mr. President and Members of the Seaboard Railroad Surgeons Association:

My only apology for presenting a paper on "Uses of Apomorphine" is that many of us are general practitioners, as well as surgeons, and so may find a few words on this subject useful.

Apomorphine is a derivative of morphine or codein, and is one of the most valuable drugs we have. It is especially useful because as an emetic, acting upon the vomiting centers, it does not irritate the mucous membrane of the stomach, as do other emetics. This is especially true in gastralgia and acute indigestion. Given hypodermically, the effect of apomorphine is produced in two or three minutes; thus making it a quick remedy in cases of poisoning. Even in opium poisoning, if the opium has not produced drowsiness, the result can be gotten from apomorphine before the stomach pump can be used, even though it is in your emergency satchel.

In any case, where relaxation is wanted, one can use apomorphine with quick and good results. It is useful in croup, asthma, hysteria, hystero-epilepsy, eclampsia, tetanus,—and convulsion, even from strychnine poisoning. In eclampsia, where large enough doses of morphine is contra-indicated, you can relax patient, control convulsion, and produce elimination through the skin (thus relieving the kidneys) by the use of 1 20 apomorphine and 1-12 morphine.

Apomorphine is especially valuable in all hysterical cases where the patient is rigid, for it will not only give relief then, but will help to cure them.

For delirium tremens, or even a big drunk, apomorphine with a small dose of morphine and atrophine, and, if needed, a small dose of heart stimulant, will sober him in a short time.

For some patients, morphine alone does not have the desired hypnotic effect and for some it causes nausea; if 1-40 gr. of apomorphine be added to the morphine given such cases, the desired hypnotic effect will be produced quickly without the nausea following.

Mode of administering is very important.

As an emetic, always give apomorphine hypodermically. The stomach should be first filled with warm water before the injection is given, as this aids the apomorphine in emptying the stomach and make vomiting easier. In cases of this kind (except opium poisoning) when I administer emetic doses of apomorphine, I always combine a small dose of morphine and atrophine, and if the heart is weak, strychnine also. When thus given, the nausea will be over soon, and rest and sleep quicker.

As an expectorant, give frequent small doses by the mouth.

For pain, where the nervous tension is great, and morphine is administered quicker relief can be gotten, with less of the bad after effect of morphine if 1-30 gr. of apomorphine is added. In hepatic or kidney colic, relaxation is especially needed; it can be gotten with apomorphine added to morphine. There is also less danger of the patient forming the "morphine habit" when this combination is administered.

In summarizing, I will say give frequent small doses of 1-30 gr. by the mouth, until effect is produced, when used as an expectorant.

As an emetic, the dose is 1-20 gr. apomorphine, 1-12 gr. morphine, and 1-300 gr. atrophine.

Always give several glasses of warm, salt water, with the suggestion that the water will cause vomiting.

Reasonable care should be taken in administering to very weak patients, to the aged, and to young children.

*Read before the recent meeting of the Seaboard Railway Surgeons Association.

Pernicious Anemia, Exhibition of Case.*

By Julius D. Willis, M.D., Internist to Lewis-Gale Hospital, Roanoke, Va.

It is agreed by most authorities that pernicious anemia cannot be absolutely proven, only from the result of an autopsy, this proving the absence of any organic disease, or condition to which the anemia might be due.

The clinical picture which is ascribed to this condition is a severe anemia coming on insidiously and without discoverable cause, is characterized by a progressively unfavorable course, remarkable maintenance of body weight, and constant blood changes; namely, a great reduction in the red blood cells, great irregularity in shape and size of

*Read before Roanoke Academy of Medicine, December 2nd, 1912.

the red blood cells, which are described as megalocytes or large cells, microcytes or very small cells, and poikilocytes or irregularly shaped cells, the presence of nucleated red cells, and a relative increase in hemoglobin.

The gastric analysis generally shows absence of or very low free hydrochloric acid. The urine shows nothing distinctive of the condition, although it may be abundant and of low specific gravity.

Cancer of the viscera and especially the stomach is the condition which is most difficult to exclude in making a diagnosis of pernicious anemia.

Miners anemia due to exsanguination by intestinal parasites can easily be diagnosed by finding the ova on microscopical examination of the stool, ankylostoma, uncinaria, and the tænia are the principal offenders.

An intense progressive anemia presenting all the characteristic symptoms of pernicious anemia is very rarely seen in childbearing women, either coming on during pregnancy or after parturition; in certain gastro-intestinal conditions, especially atrophy of the stomach wall; and in certain cases of nitro-benzol poisoning.

This malady most always is found to affect people past middle life and in men rather more frequently than in women, although cases have been observed at all ages. Most of the people who are affected have committed gross dietetic errors for years. Prolonged depressing nervous and mental states have been followed by the disease.

The anemia is considered by many observers to be due to chronic septic infection associated with lesions of the gums or mouth, also the absorption of toxins from the stomach and intestines which produce hæmolysis.

There is marked pallor of the skin and visible mucous membranes. The skin has a smoothed out and waxy appearance. There is breathlessness on slight exertion, extreme feebleness, and in many cases there is edema of the ankles. There is a great tendency to hemorrhage, retinal hemorrhages being very constant and characteristic. Hæmic murmurs are heard over the apex and base of the heart. Attacks of diarrhœa may occur without apparent cause. Very rarely in these cases there is observed an irregular pigmentation of the skin; this may come on only after the giving of arsenic.

Tingling and numbness of the feet, legs, and hands is often early complained of and indicates degeneration of the posterior and lateral columns of the cord. Reflexes are exaggerated early but may be abolished in the late stages. Ataxia may be marked.

Aplastic anemia is applied to the cases presenting the symptoms of pernicious anemia and characterized by atrophy of the erythroblastic tissue in bone marrow with a deposit of fat in its stead.

Splenic anemia is applied to the cases which in addition to the symptoms of pernicious anemia show an enlargement of the spleen.

The diagnosis is made on the blood findings in the absence of any discoverable pathological condition to explain the characteristic picture, which is as follows: Red blood cells diminished often to 1,000,000 or less per cubic millimeter; variation in size of the red blood cells; the presence of irregularly shaped red blood cells; the presence of nucleated red blood cells; a high color index, nearly always being above 1; a reduction in white blood cells, the average being 4 to 6000, and a relative increase in lymphocytes, the averaga being 45 per cent.

In the progress of the disease there may be periods of improvement and even health may be apparently restored for variable lengths of time, to be followed in turn by a relapse. Very few recoveries have been recorded. The average duration is 12 to 15 months.

Treatment has been disappointing. A better hygiene with nourishing and digestible food is essential. The most hopeful prospect for improvement in the way of medication is in the giving of arsenic in some form; many preparations are used, such as Fowler's solution, Cacodylate of soda, and Atoxyl. Iron may be given in conjunction with the arsenic to good advantage, but it is doubtful if it is of any benefit when given alone.

The administration of fresh bone marrow has not given very satisfactory results. Transfusion of blood has seemed to benefit in some cases. Good results have been reported from the subcutaneous injection of defibrinated human blood in this condition, as well as in secondary anemia. Antidiphtheritic serum has also been used but with very little beneficial results. Symptomatic treatment must be used when indicated.

Some German workers are of the belief that pernicious anemia is due to the presence of a lipoid in the stomach and intestines, the lipoid being oleic acid. Glycerine has been administered to convert the oleic acid into triolein which is harmless. Good results have been reported in the few cases in which it has been tried. It has been suggested that the beneficial results obtained from giving bone marrow has been due to the glycerine which was used in extracting and preserving the marrow.

The case which I now present to you is a married man of 55 years, a tailor by trade, and complains of general weakness, short-

ness of breath on slight exertion, and numbness of hands and feet. As you can see,he has marked pallor of the skin and visible mucous membranes, the skin being a light lemon tint, and is fairly well nourished. There is heard over the apex and base of the heart, loud systolic and diastolic murmurs. The transverse area of cardiac dulness is slightly increased. Reflexes are normal. There is no pigmentation of the skin and no disturbance of sensation. Vision is not impaired although he has worn glasses for reading for the past 15 years. Physical examination is otherwise negative.

Blood examination: R. B. C. 1,024 000; Hemoglobin 25 per cent. (Sahli); W. B. C. 7,000; Polys 41 per cent.; Lymph 55 per cent.; L. Monos 2 per cent.; Trans 2 per cent. Color index 1.25. An occasional nucleated red blood cell.

Gastric analysis: Ewald test meal given, 25 cc. expressed in 40 minutes. consisting of a clear fluid portion aud a sediment of bread particles. Free HCl 0, T. A. 4. Lactic acid 0, Occult Blood 0, Mic. Yeast cells and starch granules, no Oppler-Boas bacilli, no W. B. C.

Urinalysis: Amber, clear, Floc. Sed. acid, specific gravity 1022, albumin a trace, sugar 0, indican not increased, Mic. few hyaline and granular casts, few leucocytes, and some mucus. Faeces negative for ova and parasites.

Family history is unimportant. Past health prior to 5 years ago has been good. Since 15 years of age he has worked indoors at his trade. Had the usual diseases of childhood, and "intermittent" fever at 15 years of age. This was in all probability typhoid as there were five other members of the family ill with the same condition at that time, and the duration of the illness was three to four weeeks. No other acute illness. Suffered a great deal prior to 16 years ago with "sick headache"; none since.

Has no cough and does not take cold easily. Has never had indigestion, although has been very irregular about taking his meals, many days living on one meal a day because he was not hungry. Has always been a very small eater. Has never had jaundice or cramp colic. Bowels have been very costive up to one year ago, has had very little trouble since. Had "flux" when a child but no dysentery since. No piles.

Does not arise at night to void, no hematuria or gravel. Venereal history is entirely negative. Has always slept well. Has been a constant dram drinker up to five years ago but has drank no whiskey since. No coffee for 12 years. Average weight in health was 137, thinks his present weight is 128. I have not had an opportunity to weigh him.

Patient states that beginning with 15 years ago he would have a "spell of prostration" sometime during the year which would last from one to three weeks. After this would be perfectly well again. Beginning with five years ago these spells would come on several times a year. He lost some weight and was pale. Fifteen months ago while working in the garden a very pale sanguinous fluid would drip from his nose while in stooping position, this was very slight and stopped entirely in two days.

Nine months ago he had one of the "prostration spells" which lasted about one week. He afterwards went back to work and felt perfectly well for the two months following although was very pale. Seven months ago he went to his usual work and during the morning became very weak and dizzy; on attempting to get up from his chair he found it necessary to pull himself up by holding on to something. This was the beginning of his present prostration and he has not been able to work since. A few times he has gotten strong enough to walk a few blocks. For the past two weeks he has not been able to go down stairs and lies down a great portion of the time.

The diagnosis in this case is made on the following points: A severe anemia coming on insidiously, periods of improvement, the preservation of body weight, lack of evidence of cancer, absence of ova of intestinal parasites in the stool, absence of HCl in the gastric contents, and the following blood findings: Hemoglobin 25 per cent.; R. B. C. 1,024,000; high color index of 1.25; W. B. C. 7,000 with a lymphocytosis of 55 per cent; and the age of the patient which is 55 years. Numbness of the feet and hands is evidence of degeneration of the posterior and lateral columns of the cord.

Diagnosis.—Pernicious anemia.

Treatment.—This patient is now getting a nourishing diet of milk, eggs, toast and fats, fresh air; as medicines half an ounce of glycerine before each meal, and 5 gtts. of Fowler's solution of arsenic after meal. This case was seen by me the first time only one week ago.

Prognosis.—Grave.

A New Therapeutic Agent in the Treatment of Pulmonary Tuberculosis.

By Sevier Warren, M.D., M.R.C., San Angelo, Texas, U. S. A.

"The production of leukocytosis is, in itself, of little value unless at the same time the amount of opsonin in the blood, the specific opsonic index, is high enough to favor phagocytosis. The simultaneous

stimulation of leukocytosis and production of opsonins would, therefore, seem to be the object aimed at in many of the bacterial infections that have so far proved most refractory to serum therapy."—Jordan.

Herein is a statement of facts that stand an impenetrable barrier against any possibility of a serum cure—not only for tuberculosis but for all bacterial infections that entail prolonged, wasting, and cumulative pathological phenomena.

Recognizing this as an impossibility—and it has been repeatedly proven—we must turn from the therapy of organic and biological products to the therapy of inorganic or chemical agents.

Believing this to be not only the correct but the only logical solution whereby a cure might be established I begun, several years ago, a series of experiments with carbolic acid held in suspension in the mineral oil commonly known as petrolatum—which I first used as an innunction, but later hypodermatically.

These experiments have proven so amazingly successful and encouraging that I feel that I should give them to the profession, confidently believing that in phenol-petrolatum we have an agent that simultaneously stimulates leukocytosis and the production of opsonins—and in, as yet, some inexplicable way induces an immunity in the phagocytes against the resultant toxines of bactericidal decomposition and tissue waste.

As we know, phagocytosis may be intensified or diminished in various ways. For instance: the power of leukocytes to destroy micro-organisms is greatly increased by the addition of serum from immunized animals. The activity of the phagocytes are due, according to Wright and other observers, to the presence in the blood and other fluids of certain substances which act in some unknown manner upon bacteria and prepare them for digestion bp the phagocytes.

These bacteriotropic substances have been termed opsonins. They claim, and have so demonstrated, that opsonins are also present in the blood of normal animals but can be increased in amount by immunization. It would follow, therefore, that this stimulation is as much if not more of a physiological protest against the introduction of foreign matter into the blood and lymph as it is a result of pathological changes. Indeed, it seems far more logical to assume that these are not bacteriotropic substances but are, as I believe them to be, radio-active substances that are physiologically present in all sera.

As we all know, the slightest injury to normal tissue, whether it be mechanical, traumatic, or infective, is resented by nature who at once forwards her host of leukocytes to the point of attack or injury, if it be local; and registers her protest in a general leukocytosis, if the infection be general.

While in acute infections, as diphtheria, pneumonia and meningitis the injection of immunized blood or antitoxins does, as we all concede, result in an increased activity of the phagocytic activity, and that there is an immediate fall in the opsonic index which, however, gradnally rises to above normal and subsides again, with the crisis, to below normal. All of which is contrary to the theory that opsonins are bacteriotropic substances, but on the other hand it seems to me is proof positive that this function of phagocytic stimulation is a physiological one and is, I repeat, due possibly to a radio-activity of the blood serum or the hæmoglobin of the red cells.

Granting that opsonins are bacteriotropic substances and that they can be materially increased, and phagocytosis stimulated, by the introduction of living or dead bacteria, or their products, is there any reason or excuse by which we can justify the administration of tuberculin. By way of preface let me say, that if tuberculin had not had in a great measure the endorsement of the medical profession—in the past—it is my opinion that today its manufacture and sale would be prohibited by the National Government. While this support and endorsement has been withdrawn by all the leading authorities on the practice of medicine, yet I repeat it should fall under the ban of the law.

Clinically, there has never been one favorable symptom that would excuse its use. Bacteriologically, it convicts itself.

There are no more pathetic pictures than the ones which we see in this western country of those who have sought climatic advantages as the last resort from pulmonary tuberculosis—and tuberculin.

Patients in whom nature has been fighting an acquired condition impeded with the weight of a scientific abortion.

Oftentimes when reproving a patient for abusing his stomach with all of the patent nostrums that are vended I am met with this retort: Well. Doctor, what am I to do? I have taken tuberculin for six months, a year or maybe two years. You see my condition; I am worse than I ever was.

What reply can you make? The reply that will soon be made—to our disgrace—will be found on the Federal statute books.

The most serious phase in the tubercular process—and the one to which we give too little consideration—is that of the complication of mixed infection. The immediate drop in the hæmoglobin is the first microscopic finding that fixes, bacteriologically,

the positive diagnosis of pulmonary tuberculosis, the presence of the tubercle bacillus being a matter only of relative importance. I have found a decided diminution in the hæmoglobin estimate to exist before the clinical symptoms become of sufficient intensity to cause much physical distress to the patient. I have also observed it to remain at a very low percentage when the patient under rest and forced feeding has added pounds of weight, and where the fever, cough and exhaustive symptoms have almost entirely disappeared. Under these circumstances I still consider the prognosis for an arrested cure unfavorable.

On the other hand I have noted the hæmoglobin to slowly creep upwards without any very apparent changes in the clinical symptoms. And invariably I find the ultimate outcome in these cases more promising.

Hand in hand with a heavy mixed infection we get the low hæmoglobin estimate. Why? Because the staphylococci, under certain conditions, produce a substance that acts upon the stroma of the red blood corpuscles in such a way as to cause the dissolving out of the hæmoglobin.

Therefore, accepting the hæmoglobin estimate as the true bacteriological barometer of the constitutional condition it follows that any mode of treatment, or any therapeutic agent, which increases the hæmoglobin is a logical and sensible treatment. Nature, herself, attempts to points this out to us in demanding pure air, quantities of easily assimilated food, and physiological and mechanical rest.

I believe that I am warranted in saying that nature would effect a cure in most if not all cases along these practical lines if we could eliminate the mixed infection. The fact that the staphylococci are continually depleting her hæmoglobin handicaps her to the extent that she cannot furnish sufficient oxygen to sustain her vital equilibrium. It is my opinion that it is this deficiency of oxygen in the blood that prevents her bringing into action the forces with which she is endowed to repel the invasion of all pathogenic bacteria—a physiological function that both stimulates her leukocytes to phagocytic action and the power to immunize herself against the cumulative toxins arising from the debris of tissue waste and bacteria.

What is the therapeutic rationale that simulates natures method of striving for a cure in pulmonary tuberculosis?

Proceeding upon the theory that nature not only in animal but in plant life oftentimes succeeds in attaining spontaneous cures we must concede the fact that she acquires an immunity or an immunizing function either from the elements of her make-up or from the selective powers that she has of abstracting from the elements and food all that is necessary to sustain normal life as well as to recruit from her defensive forces.

The old saying of "similar similibus curante" does in no way apply to an acquired immunity nor does the theory of "familiarity (with infection) breeds contempt." To the contrary nature proceeds to acquire this immunity and to conduct her campaign against this invasion of pathogenic bacteria in the most scientific manner.

Besieged as she is from the moment of conception to the ultimacy of death by all the forces of dissolution and destruction she not only wages incessant war against an attacking force but must care for the dead of her enemies as well as her own.

This is most markedly typified in her fight against tuberculosis. She is being attacked, first, by the invading host of bacilli, staphylococci, and streptococci. Secondly, she is being constantly infected from the decomposition of the dead bacteria, her own dead and disintegrating leukocytes. Finally, she is being constantly called upon to recruit her own forces. To meet these exigencies she has—impoverished blood, usually less than two-thirds of a normal hæmoglobin, a lymphatic system riddled with tubercular foci—her lungs, kidneys, intestinal tract, in fact, all of her excretory organs involved much below normal in their functional activity.

What does she do? What can she do?

She calls preemptoriiy for food to replenish her hæmoglobin and to recuperate her blood making organs. She sends mandatory directions to every atom of tissue commanding absolute rest, and she calls upon that function with which she is endowed to give her more immunized leukocytes, but this function as we believe is wholly dependent upon the presence of an unimpaired hæmoglobin, and herein as I believe lies the key to the situation.

Aid nature to overcome or to lessen the intensity of the mixed infection and if you have not given her a cure you have so materially aided her in the fight that she is making that I am confident that with the aid of common sense treatment such as proper food, absolute rest and hydrotherapy, she will effect a complete cure in practically every case.

What therapeutic agent will control or dissipate a mixed infection, and how?

Phenol-petrolatum clinically and bacteriologically demonstrates its efficacy.

When administered hypodermatically into the deep tissues it is taken up by the lymph-

atic system and consequently conveyed directly to the blood making organs where it not only stimulates leukocytes to phagocytic activity but is either itself bactericidal or induces opsonic action in so far as the cocci are concerned. This is demonstrated by an immediate increase in the hæmoglobin, a subsiding of febrile conditions and later diminution in the staphylococci and streptococci as seen in the microscopic field.

To any one wishing to demonstrate these facts for himself I would suggest that he have his chemist prepare a one half per cent. strength of phenol-petrolatum and give, first, an initial dose of fifteen minims into the interscapular tissues, following with the minimum dose of two minims, which is increased one minim daily up to physiological tolerance. I would be glad to receive your reports.

Personal Experience with the von Pirquet Tuberculin Reaction in Diagnosis.*

By F. H. Smith, M.D., Physician in Charge Abingdon Hospital, Abingdon, Virginia.

The diagnosis of tuberculosis, as contrasted with the diagnosis of consumption —the recognition of tuberculous disease while still curable—is a consummation admittedly devoutly to be desired.

It is possibly a fact that one may be so expert in the recognition and interpretation of physical signs that he needs no confirmation of them, even in the earliest stages. Reputation as an expert and dogmatic assertion of opinion may carry conviction. The fact remains, however, that for the great majority of us there come times when signs are so slight, symptoms so confusing, the laboratory useless because of lack of material, and the Roentgenologist unavailable, that we welcome any reliable help, the interpretation of which requires neither great experience nor profound learning.

In response to such a demand, it is hardly to be wondered at that the various tuberculin tests, as they have been successively brought out, should have been seized upon; nor is it any great wonder that in their early, untried use, harm was done; nor, furthermore, that many of us have this early-learned fear of doing harm still hanging heavily over us, and the mere mention of tuberculin excites in us only a sub-conscious antagonism fostered by the early reports of disaster.

When, therefore, von Pirquet's method of using tuberculin as a diagnostic proceedure, free of any element of danger, was announced, many still felt skeptical in the first instance of its safety; but more lately the doubt has taken the form of skepticism as to its utility, at least in the direction as to whether a positive reaction means tuberculosis now clinically important: a doubt all the more justifiable because the originator of the method himself lays stress upon its use as a diagnostic proceedure only in the case of infants and children.

This skepticism of its value in the adult now seems absolute, until hardly a single authority accords it any place among diagnostic resources: not that the reaction when obtained is not specific, but because, to use a quotation in one of this month's journals, "in adults it (the von Pirquet test) gives positive results in nearly all cases, even with persons who appear to be in perfect health, but who in consequence of the wide prevalence of tuberculosis in infancy carry with them remnants of a quiescent or healed focus. The latter condition is rarely of clinical interest; hence the von Pirquet reaction is of relatively little value for diagnosis of active tuberculosis in the adult." (Journ. Amer. Med. Asso., vol. LVIII, No. 23, p. 1774, "Queries and Minor Notes.")

And among the better informed general practitioners this position is reflected in the question which confronts me nearly every time I report a positive von Pirquet and seem to give it any place in building up a diagnosis of tuberculosis: "Do you not get a positive von Pirquet reaction in nearly every adult patient tested, tuberculosis or no tuberculosis? Therefore, if positive, to what degree and in what measure is the test reliable?" I have no recollection of having been asked the question: "Does a negative tuberculin reaction rule out tuberculosis?" evidently because the majority at least believe that a negative reaction must be rare in any circumstance.

Having a general notion that my own experience with the reaction was not in accord with general experience, I undertook a review of the cases in which the test had been applied: and the fact that the results of this review is so contrary to the rule is my apology for this analysis of those cases.

Our technic is strictly in accord with standard instructions: The site, usually the flexor surface of the forearm, is cleansed with ether. Then, one drop of sterile glycerine is placed on the cleansed area, and about one inch below one drop of Old Tuberculin. With a special scarifier supplied by the manufacturer of the tuberculin an abrasion only through the superficial skin is made, first through the drop of glycerine, and then through the drop of tuber-

*Read at the meeting of Southwestern Virginia Medical Association, June, 1912.

culin. The reagents are allowed to "soak in" for 20 or 30 minutes, then protected with sterile gauze, the reaction read after 24 or 48 hours. Glycerine is used simply as a control. If the points of inoculation with glycerine and tuberculin present the same appearance when read, then the reaction is negative. If there is some redness about the point of inoculation with tuberculin, greater than that about the inoculation with glycerine, then the reaction is positive in some degree or other.

Unfortunately, there are still a large number of cases of tuberculosis in which no other aid than the ordinary symptoms and signs are needed for diagnosis. Leaving such largely out of consideration, for only in a few was the test applied, I still find complete records of 42 cases in which the von Pirquet method was applied diagnostically during my service at the Abingdon Hospital.

I. Negative Reaction.

We do not use the test routinely: in fact, we never use it unless tuberculosis is suspected in the lung or elsewhere, or unless the history points to a definite exposure. Therefore, it is all the more remarkable that the *negative* responses in these *suspected* cases total 23 (54.76% of the total number.) Embraced in these cases are a number with localized signs of consolidation in the chest, with inconstant rales or with no rales; or of cough, anorexia, weakness, etc.; or cases of enlarged cervical or abdominal glands; febrile illnesses as yet of unexplained origin, etc., etc., and, to be specific, one case may be mentioned of the negative reaction—negative in the adult, fortunately for us in diagnosis:

W. K. W., æt 21, admitted with a diagnosis of pneumonia. Signs never positive of consolidation, though very marken bronchitis; no abdominal symptoms or signs on admission. Second hospital day, recurrent chills, sweats, hyperpyrexia, and shortly afterwards delirium. Laboratory reactions permitted of a diagnosis of tuberculosis of a miliary type or typhoid fever. Tuberculin and Widal reactions both negative. Shortly afterwards tympanites, a few rose spots and the typhoid tongue seemed to throw the balance in favor of a diagnosis of typhoid fever, and shortly afterwards there was a questionable Widal response. But just then a migrating pneumonia set in, which seemed to point rather to a miliary process again; in spite of which fact the von Pirquet test remained constantly negative: the patient ultimately made a perfect recovery and was discharged with the lungs absolutely clear, and no further reason to doubt the diagnosis of typhoid fever.

And 15 other cases, 16 of the 23 who gave a negative response to the tuberculin test, were not regarded finally as being tuberculous; the negative reaction serving in several as well as it did in the case reported.

Nevertheless, *7 of the 23 were diagnosed tuberculous, in spite of the negative reaction.* As radical as this may seem, one case suffices to show that such a diagnosis is not necessarily strained:

Mrs. J. S. W., æt 26, admitted with a diagnosis of incarcerated fibroid. Signs and symptoms pointed unmistakably to advanced tuberculosis of lungs and pleurae hence we felt a doubt as to whether the abdominal distension and nodular tumefaction might not also be tuberculous. Yet the von Pirquet reaction was persistently negative; the patient was subjected to exploration. Widespread tubercles, adhesions matting the contents of the abdominal cavity into such a conglomerated mass that it was impossible to disentangle them, a fecal fistula on the third post-operative day, and death after six weeks, with obstructive symptoms.

Others equally positive might be cited from our records, but one such case should seem sufficient to warrant the statement that *a negative von Pirquet reaction does not absolutely exclude a diagnosis of tuberculosis.*

II. Positive Reactions.

Only 16 of the 42 (45.23 per cent.), the large majority of whom were adults, gave a positive reaction to the test.

As stated before, we rarely use the tuberculin test in a proved case; hence the rather low figure may be somewhat explained; however, we may use these cases to indicate the answer of experience to the question of how much reliance is to be placed on the positive reaction in the adult.

In case we wish to make the clinical record unusually complete for one reason or another, such as to satisfy a doubt in the minds of one or another interested, we apply the test even in the advanced case;only four of this class (9.52 per cent.), gave a positive reaction. One, a case of renal tuberculosis with many bacilli in the urine; another, a case of tuberculous osteo-myelitis, in which amputation was urged and declined, etc. In this class the positive reaction is of convincing importance, and yet in just such advanced cases, our experience points, a negative reaction may sometimes be expected, as witness the case last cited.

In the second class are placed those reactions of medium grade, such a reaction as we are taught is to be obtained in most every adult patient. And it is toward this class that most criticism may be expected to arise. There are nine such cases (21.42 per cent.). When the tuberculin was ap-

plied and read as positive in these nine, none were deemed conclusively tuberculous, recognizing the authoritative negation which attends such a decision. And yet in four of them, the laboratory *afterwards* confirmed the diagnosis in the positive sputum—in one case from the granulations of bone lesion; another died in three months with all symptoms and signs undoubted, in spite of a very moderate reaction; another was almost helpless with the diplegia of Pott's disease, etc. So far, only three of the nine placed in this class remain with the diagnosis of tuberculosis resting on slight apical signs plus a moderate cutaneous tuberculin reaction.

A third class, also small, in which a very strongly marked reaction, persisting over several days, was in itself regarded as being significant enough to positively warrant a diagnosis. We have so classed three (7.14 per cent.).

One, a case of tabes mesenterica, has since shown positive signs in the chest.

2. The sputum contained the bacillus only after repeated search, and yet the strongly marked reaction indicated some weeks earlier that the ill-defined signs in one apex were those of a beginning lesion.

3. Had no pulmonary symptoms whatever, no sputum, and yet the signs in the right apex were strongly suggestive. The reaction was the most marked and most persistent of the series, and in spite of evidence to the contrary, we had no hesitation in pronouncing his trouble tuberculosis.

Finally, there is a small fourth class of positive reactions which lead to diagnostic confusion. These three cases (7.14 per cent.) are interesting enough to abstract:

C. P. H., æt 24. Complains of weakness, dizziness, jaundice. Bronchitis confined to left upper lung, a mild reaction; patient recovered after four weeks of jaundice and diagnosis of possible tuberculosis was discountenanced by his physicians and other consultants. Yet the later history suggests that the original idea of the condition may after all confirm the positive reading.

G. G. K., æt 24. Complains of painful swelling of the testicle of eight weeks duration. High fever of hectic type, rapidly lost weight, positive von Pirquet: diagnosis of tuberculous orchitis; pathological examination after castration simple suppuration, multiple abscesses which had practically destroyed the testicle, with perfect health maintained after one year.

V. M. H., æt 16. Complains of febrile illness of two weeks duration. Strong family history of tuberculosis; cough; rales; feeble breathing in lower chest with crackles; mild tuberculin reaction; later course, the positive Widal reaction, etc., led to the diagnosis of typhoid fever, with good recovery. But patient has not been heard from since.

Such are the cases, only 7.14 per cent. of the series, which, if larger, would lead us to agree with the great majority in attaching no significance to the positive reaction in the adult.

Summarizing.

Total cases of the series 42:

I. Giving a Negative Reaction:	
(1) Diagnosis of tuberculosis discarded,	16 (38.09%)
(2) Diagnosed tuberculous,	7 (16.66%)
Total,	23 (54.76%)
II. Giving a Positive Reaction:	
(1) All signs conclusive,	4 (9.52%)
(2) Diagnosis made on signs plus reaction	9 (21.42%)
(3) Marked persistent reaction in itself diagnostic,	3 (7.14%)
(4) Positive reaction caused confusion as to nature of immediate illness,	3 (7.14%)
Total,	19 (45.23%)

Conclusions, to which this limited experience seem to point:

1. The von Pirquet cutaneous test is harmless. No general reaction has been provoked even in the hectic case. At the worst, the only local complaint is of trivial character—a recommendation, even if the test be not so strictly diagnostic as others;

2. Its application is simple, inexpensive and non-technical;

3. It has no function as a means of differentiating tuberculous from non-tuberculous lesions when both appear in the same individual;

4. Any noticeable difference at the point of inoculation with tuberculin as compared with the reaction at the point of control is read as a positive reaction;

5. Granted a positive reading of the reaction, the interpretation of that fact is the bone of contention: postponing this question for the moment, the curious fact of this tabulation is not the interpretation of the positive reactions, but the large number of negative reactions (54.76 per cent.), all the more remarkable in view of the fact that only suspected cases were tested. We rarely try the test a second time when once negative, but in none of them was a second positive when the first was negative. Nor have we tried other methods of application to control the von Pirquet method;

Though we are fully prepared to admit a rather small experience, and hesitate to base a final opinion on it against the weight of opinion to the contrary, nevertheless this experience does indicate that:

6. The von Pirquet reaction is of aid in differentiating between a healed lesion which still gives signs of consolidation hardly to be distinguished from the early lesion, in the absence of rales or symptoms indicating toxemia; and this tentative opinion is based on the experience that cases with doubtful signs in the chest and who oftenest fail to give a positive reaction, are quiescent or healed cases; while, on the contrary, the active beginning lesions, do give a positive reaction, and later developments confirm a diagnosis of an active lesion;

7. A few cases of demonstrable tuberculosis failed to react (16.66 per cent.). Some of these were advanced, and probably poor resistance is the explanation of the failure. For the others no explanation is immediately forthcoming, though we oftenest had failure in bone lesions;

8. Only 38.08 per cent of demonstrable cases gave a positive reaction—small in comparison with the non-reacting cases, and at variance with prevailing opinion, as most of our patients are adults;

9. A positive reaction occurred sometimes where the illness was other than tuberculosis (7.14 per cent.). These patients must have had, or had at the time, tuberculosis, but their present illness was probably not tuberculous, and hence confusion;

10. Finally, the von Pirquet reaction has been helpful to us in 76 per cent. and confusing in 24 per cent.

A Study of Occipito-Posterior Positions.*

By G. K. Vanderslice, M.D., Phoebus, Va.

The term "meddlesome midwifery" is so often on the tongue at this time, and is such a term of disapproval and condemnation that we are rather apt to follow the swinging pendulum to the extreme and allow all cases to proceed until a life and death emergency arises. "Let nature take its course," a *clerical* gentleman said to me recently, referring to certain most difficult obstetrical problems. Again and again there have arisen some who argue strongly and urgently against, and condemn, many of our well tried and valued obstetric proceedures as forceps, antiseptics, vaginal examinations, repair of lacerations, among others.

My observation and experience lead me to assert that there are few conditions where exact knowledge and efficient, skillful, though slight assistance will yield better results than in certain cases where the occiput enters and advances in a posterior position; but if results are not better the personal satisfaction and peace of mind are certainly desirable.

In occipito-posterior positions what should take place is:

"1. *Descent* and *flexion*, the head entering brim.

2. Rotation, in the "hollow screw of the pelvis" in the direction of least resistance when it reaches the floor of the pelvis, and in the vast majority of cases the occiput turns around and comes out *anterior* under the pubic arch, the rotation occurring below ischial spine."

This has been shown in the very interesting experiments made by DuBois on the body of a woman dying during labor—the body and uterus was cut in two through the abdomen, above brim of pelvis, the child was then forced through the parturient canal, occiput posterior, in flexion, the occiput came out front every time as long as the perineum remained firm and resilient."

Hirst gives this general law: "Whatever portion of the fetal body first strikes the resistance of the pelvic floor, whether it encounters this structure behind or in front of median transverse line, is directed forward, inward and downward under the arch of the symphysis."

Playfair states, "in a large majority of cases during progress of delivery in occipito-posterior cases the occiput rotates forward."

The American Text Book of O— says: "In right occipito-posterior positions the head enters the pelvis O. D. P. always, and should invariably enter inferior strait O. D. A.: but the process by which rotation is accomplished is unfortunately so delicately balanced that it is always liable to failure and this, if it occurs, necessarily results in persistence of posterior position of occiput, and is always attended by great risks to both mother and child.

The occasional discharge of the head in a transverse position beneath the symphysis pubic, occurring with small heads only, or where forceps assist moulding, indicate the effort of the occiput to rotate anteriorly and most undoubtedly this would have occurred, if delayed momentarily and slightly assisted; and doubtless such position occurs only where labor is tumultuous and head small and is hurried through, otherwise the moulding and compression sufficient to admit of the passage of the head in this position would seem dangerous. In the cases that I have seen, the head seemed round—sugar-loaf in appearance.

The occasional discharge of head in this position lead to the description of two additional vertex presentations (among the eight mentioned by older writers on obstetrics).

*Prepared to be read before the Seaboard Medical Society, Newbern, N. C., December, 1912.

In many cases, I am confident, O. D. P. presentations are found and considered O. D. A. presentations, since unless carefully watched, or forceps are applied, and diagnosis of position carefully made early, the complete rotation may not be observed, and in many cases, the physician may find that presentation on making the first examination late in the course of labor.

There are certain factors or forces—physiological and physical which are concerned in the consideration of this subject. Physiological—the uterine contractions. "There is a very irregular and imperfect action of the pains, which characterizes the first stage of labor in a large proportion of posterior positions. The exact cause of this well-marked feature of such cases is unknown. Probably it is a reflex due to pressure, mechanical mal-adaption, but it is a fact that irregular, variable and ineffective pains prolonging first stage is suggestive of a posterior position.

Also in my observation this slow progress and inefficiency of pains continues until rotation begins on the floor of the pelvis, in many of my cases forceps having to be used, about three times as often as in the anterior positions, but when rotation has started, rotation and delivery has always been rapid and expeditions, which seems contrary to the experience of the writers consulted; apparently, also, because by the time rotation is complete, this having taken place below the spine of ischium, the perineum is stretched and passage of vulva less delayed.

(b) *Physical.*—The hollow screw character that is given to the interior of the pelvis by lateral inclined plains or excavations as they are now more commonly and correctly called.

The spine of ischium and a broad line drawn upward and forward to the brim of the pelvis, at the ilio-pectineal eminence, are a dividing line between the anterior inclined plain or excavation, and posterior inclined plain or excavation.

The *anterior lateral inclined plain* or excavation. which is broader and flatter, sloping toward and terminating under the pubic arch, makes the easier and natural groove along which the broader end of fœtal head passes toward delivery in occipito-anterior positions, its incline assisting normal rotation.

The *posterior lateral inclined plain* or excavation lies posterior to the boundary mentioned, and after a certain point is largely made up of the soft parts, it is bounded posteriorly as an important item by the sacral edge, and lower beneath spine of ischium is the sacro-sciatic ligament, at which point this posterior excavation curves beneath spine and terminates beneath the arch of the pubes.

As indicating the location of the bi-temporal and bi-parietal measurements of fœtal head entering in oblique diameters of pelvic brim, it may be observed that the line drawn from promontory to ilio-pictineal eminence is shorter than from the sacro-iliac synchondrosis to the symphysis pubes; that is, there is a narrow, deep excavation posteriorly and a broad, flat one anteriorly, consequently the head fits less accurately in occipito-posterior positions, and engagement is less satisfactory, and there is a dangerous tendency to extensions of the head as it passes the brim, its broad bi-parietal diameter impinging upon the edges of the excavation at brim of pelvis.

As the head enters the brim of the pelvis in occipito posterior position the following conditions influence strongly the progress of the labor:

(a) When descent of head occurs in good flexion, the labor progresses favorably and rotation of occiput takes place satisfactorily and appears occiput-anterior, normally.

(b) When descent occurs in moderate flexion, it may soon be converted by contact of brow,—longer end of cephalic lever —with brim of pelvis, into a good flexion, then as in (a).

(c) When descent occurs in state of extension, it may be converted into face or brow presentation or be arrested at the brim, or advance with great difficulty in extension.

After entering the pelvis in condition of extreme flexion, (a) progress continues in extreme flexion to satisfactory discharge, occiput-anterior, normally.

(b) Progress continues in moderate flexion and becomes converted into extreme flexion on the anterior inclined plain—the occiput released advancing more rapidly in the roomy pelvis, being shorter end, and the chin is flexed on sternum.

(c) It may progress in *extension* and when it reaches the floor of pelvis the two ends tending, both to anterior, it rotates into hollow of sacrum unless the spine of ischium be less prominent than usual and than the sacral edge, or assistance be given, and delivery in persistent occipito-posterior position is accomplished by many difficulties of delay and compression and distressing laceration, as the longest occipito-frontal diameter of head must pass the vulvular opening in process of flexing head, by which means delivery takes place; the delivery taking place by the advance of the occiput first over the perineum, or the brow first under the symphysis.

The delivery of head in transverse positions I have already mentioned: these being formerly considered two additional positions

and added to two anterior-posterior positions formed eight (with those accepted now) vertex presentations, when the rotation is not completed.

Operative interference has been called for in nearly all the occipito-posterior cases that have come under my observation, though this is far from the general experience (according to Hirst in one in seven cases the forceps are required). In these casee of mine forceps have been used at the brim for high arrest and in medium cases before the occiput reaches the floor of the pelvis, and lower down on the floor of the pelvis.

At the brim of the pelvis when operative interference may be called for are:

(a) Where the head simply needs to be flexed to enable labor to proceed satisfactorily, the hand is introduced for this purpose.

(b) Where high arrest at the brim, without waiting for dangerous face presentation, the following proceedures have been recommended:

1. Version, podalic, producing anterior sacrum, and then simple delivery.

2. The head may be rotated anteriorly above brim, flexed, and steadied by assistant and forceps applied.

3. The forceps may be applied while occiput is posterior. This is not strongly recommended if other methods are feasible; though with the use of axis traction forceps, restoration of flexion of head, when possible, and a fortunate skill, it is stated by some obftetricians that it is less dangerous to the soft parts of the mother than is extraction of after coming head, however advising uersion to operators of smaller experience.

Lower down in the pelvis before rotation has occurred to assist prolonged labor and produce anterior rotation and prevent posterior rotation:

1. Flexion should be assisted in every way—pushing up forehead, two fingers in vagina, during pains, and at same time endeavoring to push the sinciput toward a posterior position.

2. Whole hand introduced to grasp head at occiput to assist flexion, drawing down occiput and rotating, if possible.

3. Use of vectis or fillet to draw down occiput, increasing flexion and giving a plain for rotation and assisting it—or one blade of forceps so used—not altogether to be advised.

4. The use of forceps applied in reverse position as advised by Dr. Richardson, of Massachusetts (1885), in order to correct danger of injuring soft parts of mother while head is rotating, and because traction is made at the point which will increase flexion and thus aid rotation.

5. The use of forceps—the application here presents some especial difficulties—they should be applied to the side of the pelvis and then have an oblique position as regards the head according to my experience—The Am. Text Book, however, recommends the side of the head) and after traction during each pain the forceps should be loosened and then permit rotation if there be any tendency; my own rule is to remove the forceps and re-apply, finding that each re-application assists rotation and the careful removal assists the rotating head, giving more room; and as soon as the occiput has become anterior remove and permit delivery to proceed naturally.

Management of persisting (difficult) occipito-posterior positions: This is an abnormal mechanism (Am. Text Book) and can occur only where easy adaptation of head to pelvis. This is stated to have occurred in 2585 births 79 times and to have presented exceptional difficulties (West). McDonald states when it occurred there is almost always a want of proportion between head and pelvis; and forceps will generally be required.

Playfair says if rotation doesn't occur the fair inference is that the head is so placed as to hinder delivery with face to pubes the best termination and no endeavors should be made to prevent rotation into sacral hollow.

The expulsion in this position always requires, in addition to a lax adaptation, the presence of very powerful uterine contractions or the application of powerful traction by forceps, and even when these conditions are present the process is a long one. Extra precautions should be taken to preserve the perineum and relieve the head from pressure—a double episiotomy may be required; the forceps are used in the manner sometimes called "pump handle" application.

The American Text Book says: "Although the fœtal head is surprisingly tolerant of the excessive compression necessary for this change of shape the process results in the still-birth of a large proportion of children, while the prominence of the occiput, even after the most extreme moulding, exposes the soft tissues of the pelvic floor to a degree of tension that almost invariably results in deep laceration of these structures during stage of expulsion; and in many instances the head cannot be delivered in this *position* with forceps, even where dangerous force is applied.

Considering these dangers, and doubled mortality it has seemed that some effort made in a right direction might still be used and give a better turn to these bad matters.

A number of cases of this character have

come to my notice—where with the use of forceps, with repeated, almost violent, efforts it was impossible to deliver the head in occipito-posterior position, but where the head is caught by the hand, and flexion, which has been lost by means of the use of forceps, or other forces, is restored, and then rotation assisted during the pains by the hand or fingers, labor may be completed by the mother's efforts, or small forceps, without difficulty.

Version by vertex was advocated by Dr. J. S. Parry, of Philadelphia, who had a very small hand.

Prof. Morisani, of Naples, with a very small hand was a successful applicant of same process.

Dr. Harris, of Philadelphia, stated he had delivered a wompn in three pains who had labored for hours ineffectually.

Dr. Wm. C. Dabney in his lectures constantly urged patience, since he found rotation often occurred at the last moment, spontaneously even.

It has been reported, at least one case is recorded, that the head has rotated and the shoulders not, producing a condition of dangerous torsion of the neck with fatal result. However, it is urged that while the head is rotating about 135 degrees from the posterior lateral excavation to arch of pubes, the shoulders might easily be assisted through abdomen to rotate from one anterior lateral inclined plain to the other, about 45 degrees.

In conclusion:

1. These are cases where skill and exact knowledge of the position and mechanism, and efficient assistance are necessary to peace of mind.

2. Make earliest diagnosis possible of position of child and presentation, by (1) presenting part, (2) position of fœtal body, (3) location of fœtal heart sounds far back in flank, below line of umbilicus, (in reverse order).

3. Watch carefully for flexion and discover extension as soon as possible, to be able to feel the anterior fontanelle readily means extension or insufficient flexion.

4. Assist flexion always—restore if lost at any period, by means indicated—finger or whole hand.

5. Assisting anterior rotation and confidently expecting it, when the hand reaches the floor, if flexion has been maintained. And where assisted or produced, watch and assist rotation of shoulders.

I have used this manœuver, to assist delivery: two gngers of right hand are placed upon the upper side of brow beneath symphysis and pushed upwards and backward between pains and during a pain, and at the same time attempting to rotate the shoulders with the left hand on the abdomen. In this way I have delivered a case without forceps by the mother's pains where forceps had previously been applied unsuccessfully.

6. In using forceps apply in such way and loosen or remove in such way that rotation anterior may be assisted.

The manœuvers of Scanzoni, as described by Williams, offers a method which has been sufficient in such difficult cases: the foreeps are applied to the head over the ears and rotation is produced at same time traction is made, until the rotation has produced the O. D. A. position (in O. D. P. cases), then the forceps, which are upside down, are removed and re-applied with forceps turned and delivery is produced as in anterior position.

7. Avoid posterior rotation if possible, but if present, at least make some effort to produce anterior rotation before dragging through perineum.

I have tried to urge that jamming should not take place if flexion is maintained complete throughout, and if it occurs it means extension, and to urge that, if possibie, use whole hand, push back and restore flexion and maintain it and allow normal rotation, assisting in every way possible, and not to drag the head through in extension occiput-posterior, nor drag head around in extension.

In my practice after the earliest years, I can recall only one case delivered in continued posterior position, in about 1000 cases of all kinds, of which 25 per cent. were occipito-posterior. In this case the head was small and labor very rapid and delivery occurred before the position was accurately determined; which leads me to believe that the difficulty is not very great and that careful attention should disclose all the indications in each case.

No originality is claimed for this study, free use, even where not specifically mentioned, being made of Dabney's Lectures, Playfair's Midwifery, American Text Book of Obstetrics, Hirst's Obstetrics, William's Obstetrics.

Remediable Psychogenetic Factors of Disturbance in Childhood; Methods of Management Shewn by Cases.

By Tom A. Williams, M.B., C.M., Edin., Washington, D. C., President Washington Soc. Nervous and Mental Diseases, Memb. Corresp. Socs. of Neurol. and Psychol. of Paris, etc.

Peculiar behavior in a child need not mean either insanity or defect. It may be caused by a temporary mal-adjustment to a painful situation with which the child finds itself unable to cope. If the sky is not cleared by understanding, the child's atti-

tude towards its surroundings may become morbid and a neurotic character will develop. Such juvenile misunderstandings are a fertile source of psychasthenia and other neurotic disorders in after life.

The parents' earnest desire to do right is insufficient *unless guided by insight.* Ill-formed theories, whether pseudo-scientific, ethical or theological, frequently ship-wreck the psyche of young people.

A parent of a girl of eleven refused her impulsive affectionateness and restrained her love of active games from a *desire for propriety.* As a result, the poor child, believing herself unloved, brooded, lost appetite and began to pine. Fortunately, no time was lost in inept medication. Psychopathology explained the case and she was quickly restored to health.

Another child was made over conscientious when four years old through reproofs of his jealousy of a little brother. Self-imposed penances grew upon him until his peculiarities made life a burden. A few months of wise direction and practice by the boy, then fourteen, cured him.

In a boy of eight, fear had been bred by over solicitude through his father and mother not habituating him to going to bed alone, so that they become enslaved to his need of companionship while going to sleep, and finally even during the day; for the boy could not go round the corner alone without a terrifying hallucination taking possession of him, so that physicians believed him to be an epileptic. Proper management quickly removed the fits.

A little child of eight had been treated for St. Vitus' dance and kept from school for a year because of numerous grimaces and gestures. Proper analysis showed that these were attempts to kiss away the poisonousness from the air she exhaled, so as to avoid injuring others, and the gestures were due to attempts to give the healing touch to the objects upon which she trod, to lessen their injury.

The methods of managing such situations in children are outlined in this paper.

The rapid cure of these cases must be contrasted with the two years required for the mastery of the obsessions in a woman whose extreme inadaptibility was purely the result of mismanagement of a disorder of similar type during her childhood.

1705 N. St.

Alkaloidal Therapeutics.

By A. T. Cuzner, M.D., Gilmore, Florida.

The writer of the following has reached the ripe age of seventy-four. We have practiced both North and South; have treated blacks, whites and half breeds.

When we graduated in 1864 at the College of Physicians and Surgeons, New York, we were well packed mentally with "Formula Therapeutics" and our practical experience at hospital clinics was large.

However we soon learned, in our every-day practice, that such stock would not fit all our customers, i.e., patient's cases and wants.

These complaints, and brilliant operations, found in the wards, are usually conspicuous by their absence in the every-day practice of the ordinary physician. The following from the pen of Dr. S. J. Meltzer will best express this thought:

"Our great medical teachers received their training in clinics closely adjoining the autopsy-room, and won their spurs by making brilliant diagnoses of such pathologic conditions which permitted early their verification on the autopsy-table. 'Interesting' cases of this type would naturally rarely benefit by drugs, and which form mostly the bulk of the work of the great clinician in his hospital activities as well as in his consultation practice, give a wrong impression of the importance of drugs and in knowing when, how and which of them to use, such classical cases as above mentioned form only a small fraction. It is instructive to know how some of these great clinicians treat their patients when they have to deal with them all along, from start to finish. In a long experience I came across prescriptions by some of our great men which were a revelation to me. I could fill a page or two with such indiscreet gossip. Polypharmacy, incompatibilities, and even notorious patent nostrums were there."

There has come to pass in the medical profession of late years, a pessimism as to the value of drugs in the treatment of diseased conditions. This was loud-voiced by the "Great Osler." Note the result!

The regular doctor has become diffident as to the value of his tools, while the assertive advertising quack has found a rich bonanza in playing on the faith of the general public in the value of medicines as curative agents. There has likewise arisen many side systems of treatment of the sick, cutting into the practice of the regular physician.

Let us elaborate somewhat, but briefly!

About twenty years ago, while floundering about in the slough of disappointment and doubt, as to the value of drugs in the treatment of disease, our attention was called to the alkaloidal system, or plan of treatment, by means of prepared granules of definite and unvarying strength and composition.

From that time to the present we have

regained our faith, and increased it, in the value of drugs as remedial agents, especially the alkaloids.

A better knowledge of the alkaloids, and a more extended use of them, will eventuate in a much more perfect system of drug medication than we have at the present time. We don't say that drug medication is equal to the cure of alt cases presented for the doctor's care.

It will not unite a broken bone. But it will allay, and keep within proper bounds, the inflammatory action nature sets up, and mitigate the distress of the patient.

Neither will alkolometre meet, and convuer, every cause of disease presented for treatment. There are limitations and environments opposed to its curative power.

Howevsr the alkaloids being limited and specific in their action, can be used to a much greater adventage than the crude drug, their extracts or tinctures.

Let us amplify!

We will examine the drug opium. Now we have the crude drug, its tinctures, extracts and its alkaloids. Opium is both a remedy and a poison. It is a poison when it unduly depresses the vital functions. It acts as a remedy when it reduces undue excitability of a part or the whole of the body. Every remedy becomes a poison when it affects injuriously the functions of the body.

Opium has some nineteen alkaloids; some of these exhibit but a slight trace only, and we find that certain of the contained active principles are strongly antagonistic, one to the other.

Thus we have the sedative morphine, and the convulsant thebains.

The principal alkaloids of opium in use are morphine, codeine and narcein.

Again, in the calabar bean we have the depressant, physostigmine, and the strychnine-like calabarine; in gelsemium we have the coniine-like body gelsemanine, and gelsemine a tetanizer.

Once more—take the drug digitalis. Here we have three alkaloids: digitonin, digitalin, and digitoxin. The first, digitonin, is sedative in its action; the second, digitalin, is tonic, while the third is toxic.

Now do we wish to obtain the soothing action of the crude drug we can administer the digitonin and avoid the toxic action of the digitoxin, or the tonic power of the digitalin. or the tonic action of the digitalin alone.

In general practice we find no two cases of a well-defined disease alike in their manifestations, hence by the use of the alkaloid we can reach these varied pathological conditions.

Let me present one case of applied alkaloids from a late experience. My wife, aged seventy-three, has been ill several times the past year. Having taken some saline laxative for constipation, it worked her severely. Ou her return from the closet she staggered to a chair and dropped into it, saying, "I am so faintl" My daughter calling me from my office in great alarm, I hastened to the room with my little case of granules of alkaloids, and gave my wife one of atropine and one of glonoin. Realizing that the action of atropine, as a blood diffuser, was slow, and the glonoin was not fast enough as a heart stimulant for my purpose,. I caused my wife to inhale the fumes of ammonia from my fingers which I moistoned for that purpose with stronger ammonia. I could not feel any pulse at the time I commenced treatment. and observed her face was of a deathly pallor, and her lips colorless, while a cold sweat covered her face. At this time I could feel no pulsation. During all this time my wife uppeared conscious.

Another use for atropine! It is an excellent remedy for hemorrhage when such cannot be reached by ligature. It acts thus by relieving blood pressure.

We might, in our plea for a more general study and use of alkaloidary medication, prolong this writing to undue length, but enough has been said to induce many to take more interest in the subject, and to give the alkaloids a more extended use.

Under What Presuppositions are Apoplectic Attacks to be Looked Upon as Due to Accident?

Scheu states that, under the law, an occupational injury must occur within a specified interval. Insidious affections cannot be ascribed to occupation without a review of the case. There must be a demonstration of undue muscular exertion or external violence. Cerebral apoplexy occurs in those predisposed under the most varied conditions. It frequently supervenes while the victims are following their occupation in the absence both of undue exertion and violence; yet the tendency is invariably to accuse the occupation. When a stroke has occurred to a patient while at work the following data should first be obtained: Was the victim previously healthy and, if not, what is the history of his diseases; was he ever a soldier; if married, are his children healthy; had he been known as an alcoholic; what was the nature of his regular occupation; was the labor on the day of injury in any wise different from his regular duties; was the case recognized by the physician first summoned as an "accident."—Zeitschrift fur Versicherungsmedizin.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm names of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme court of Victoria at Melbourne, and others reported before in the medical literature, show that every physican should see that his patient gets exactly what he prescribed. No "just as good" allowed.

Diabetes Mellitus.

I am undertaking an exhaustive research into the pathology, etiology and dietotherapy of diabetes mellitus. I am very anxious to hear from every physician in the United States who has a case under treatment, or who has had any experience in the treatment of this malady. Von Noorden says "the best treatment for the diabetic is the *food* containing the *greatest* amount of *starch* which the patient can bear without harm." If any physician who reads this has similar or contrary experience, and would take the trouble to write me, I would esteem it a special privilege to hear from him, if only a postal card. Kindly address

William E. Fitch, M.D.,
355 W. 145th St. New York City.

Some Clinical Aspects of Abnormal Arterial Tension.

Functional high pressure is treated by the author with the hippurates, which he looks upon as safe and sure depressors of tension. The particular action of this remedy was discovered by Oliver. The author uses the hippurate of ammonium and that of lithium; the latter salt is the stronger but the more depressing. In ordinary cases of high blood pressure these salts reduce the arterial tension, never upset digestion, and do not cause unpleasant symptoms, unless an excessive dose has been given and the tension reduced too quickly. Their action is more lasting than that of the nitrites, In any ordinary case of high tension with dilated heart a cure can be readily affected by giving a hippurate in conjunction with strophanthus, the latter drug being preferable to the other cardiac tonics, as it acts but little on the arterioles. The dose of the hippurate given should be small; 5 grains are considered by the author a full dose, and he rarely gives that more than once a day. The hippurate of ammonium is borne better by old people, but the dose must be larger, Most cases of high tension in old age, when the arrerioles are markedly atheromatous. are best left alone, the patient's life only being regulated.

In spasmodic asthma, even in cases with markedly high tension, the most quickly acting measure, with the exception perhaps of a hypodermic injection of morphine, is an injection of epinephrin solution. The author has found that asthmatic attacks are fewer and milder when the tension is kept down. For the relief of the paroxysms he usually gives 5 minims of the standard epinephrin solution in 10 minims of sterilized saline solution.

In cases of Graves's disease with marked dilatation of the heart ahd murmurs, a period of very low tension often comes on. Good results may be obtained by giving suprarenal preparations and strophanthus. The drugs must, however, be given for a long time and only gradually left off.

The hippurates are easily soluble, and can be given conveniently in 1- or 2 grain tablets.

In ordinary cases 3 or 4 grains of the hippurate of lithium may be given daily and 6 or 7 grains of the ammonium salt. In a few days, the dose can be lessened steadily, till a dose every second or third day is enough to keep the tension normal. —T. Bodley Scott, in The London Practitioner.

Prognostic Significance of the Atropine Reaction in Cardiac Diseases.

Talley notes that the atropine reaction in the normal heart is probably from 30 to 40. A reaction of 20 or less, in a heart not recently subjected to exhausting disease, points to a degenerative process in the cardiac tissue which makes the outlook for improvement under treatment unpromising. Cases of auricular fibrillation with responses normal or above are promising subjects for treatment. Two atropine reactions in cases of auricular fibrillation, one before and one on full digitalis, enable us to determine whether the vagal or the cardiac tissue factor is the greater. The patients with a large cardiac tissue factor are the ones who usually are sufficiently improved by treatment to return to their occupations.—American Journal of the Medical Sciences.

Charlotte Medical Journal

Published Monthly.

EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

THE NOBLE AMBITION.

Why is it claimed there are so many inferior medical men? And really, now between us, why are there so many really inferior medical practitioners?

Casting about for a reason, *lack of ambition* seems to be the cause of inferiority in every class of business or in every profession. In fact, absence of ambition spells *General Inefficiency*.

Of the many ambitions that arise and persist in the souls of men there are two that have received more attention than all the others. The ambition to accumulate material possessions is the first: the ambition to excel in some personal and public career is the second.

Great as are these ambitions there are many minor and secondary ambitions that receive more or less attention from various minds in various stages of development. That seems to be specially the condition in the case of many members of the learned professions. However, there are few, very few that have given due attention to the greatest ambition; the Greatest Ambition, the Noble Ambition that will, in the days to come, receive deserved devotion from the most distinguished thinkers, students, and scientists in the world. In giving attention to the Noble Ambition, we must keep in mind also that other ambitions are worthy. No minor ambition need be discarded to achieve the greater. All ambitions, that is, all real ambitions that have some better object in view, should be encouraged. They should not only be encouraged and cultivated, but they should be increased continually in force and power.

When considering the two most prominent ambitions, medical practitioners should always remember, that although minor ambitions are not to be relegated to the extreme rear, they must not occupy the first place any longer. Accumulation of material possessions, if legitimately done, and does not occupy the first ideal in the thought of man is right. The same is true of personal careers. The desire for lofty positions in the world must not be our strongest desire. When we look upon our professional career and upon life and its possibilities, and ask ourselves, in the most serious and earnest manner, *What One Thing*, above all else, if attained, would give the greatest value to life—to our life, and for the race in general? What would be our conclusion? What one thing above all else, would we want, to realize our desire? Let us ponder over this question. Let us think, analyze, and study deeply over this immense problem—there can be but one conclusion. The one conclusion must be the result if we examine the subject from all points of view.

The Noble Ambition—the one thing that will give greatest to value, and to a life, is nothing less than *self-development*. Rebuilding yourself, and *continue the rebuilding perpetually* until you become as near as possible to human perfection, to the perfection in body, in mind and in soul. The Noble Ambition to build a body that is strong, clean and that radiates health; to build a mind that is *clean*, rich, bright, and superior; to build a soul that is masterful in every state and experience in life.

To build these things and keep in constant touch with the joys, sorrows, and splendors of life—This, indeed, can well be called *The Noble Ambition*. It makes for the superior physician. it makes for the superior citizen, and it makes for superior happiness in ourselves and in all with whom we come in contact.

GOV. LOCKE CRAIG AND THE PUBLIC HEALTH.

The inaugural address of Gov. Locke Craig of North Carolina delivered last month in Raleigh was a most scholarly production and evinced its author to be not only a profound thinker and a close student of the vital things that concern men, but possessed in high degree of that good old-fashioned virtue known as common sense.

Dealing in a masterly way with a number of the problems facing his constituency at this time the Governor's utterance on public health and vital statistics are of much interest to physicians and sanitarians as well as intelligent laymen, and are here reproduced as tending to remind the men of our profession that in Gov. Craig we have a genuine all-round Governor-of-the-whole-people who has both the capacity for intelligent thinking and lucidly uttering:

BETTER PUBLIC HEALTH WORK.

Most of the serious diseases are preventable diseases. Formerly the work of the doctor was to heal the sick, now it is to preserve the health. The beneficence of scientific medicine is to drive back disease and suffering.

We must provide for the accurate record of births and deaths and the causes of disease in every community. We can thus ascertain with accuracy the sanitary conditions in each community and intelligently work for the prevention of disease and for

ths promotion of health. Each county and each city should haxe an intelligent, efficient, well paid health officer. We can appeal to our citizenship through the press, the school house and the pulpit and encourage them to purer and more healthful home conditions, to the inestimable blessings of all the people.

TREATMENT OF ADOLESCENT HOARSENESS.

Nowadays a disease must be "pretty swell" to receive much attention in our larger medical journals. Even the texts show a tendency to omit the common things. Some time ago, a very excellent article appeared in a Western medical periodical, entitled, "Only a Cold." Zechariah said, "For who hath despised the day of small things?"

"There is a form of hoarseness frequently observed in growing boys or girls which assumes a very chronic character, and often resists every form of treatment," observed Dr. Graves many years ago. At first there is a cold, or perhaps a sore throat, but although these subside, the hoarseness remains often for weeks regardless of all that can be done to relieve the condition.

Now and then an adult, perhaps a person who is forced to use his voice considerably, will develop this condition. The physician tries everything and fails. The patient then turns to the quacks and they accomplish nothing. Just as he decides that his voice has been lost forever, it suddenly returns.

What would not a doctor give to be able to cure such a case? The texts have neglected it but certainly it is not insignificant.

One young man was thus affected before his high school commencement exercises and could not deliver the valedictory address. Another desired to compete in an oratorical contest but was disappointed.

To treat one of these cases, one must understand the pathology. There is no true inflammation, or "laryngitis," although such is usually the accepted opinion. But it is a relaxed state of this organ, especially of the muscles controlling the action of the vocal cords.

The writer has used Dr. Graves' treatment (forgotten in this progressive age) with considerable success in at least two cases. Here is the treatment,

1. Use stimulent gargles, and be certain that they are "stimulent" even if it is necessary to add small amounts of capsicum. Examine the throat at intervals for evidences of hyperemia.

2. Try some massage on Adam's apple. Use a little croton oil in these manipulations that a slight counter irritation may be realized between the treatments. (Use proper precautions with this oil. Dilute with castor oil. Begin with weak mixtures and make these stronger as needed. Avoid marked irritatiou).

3. At convenient times during the day, the patient should inhale the vapor from the tincture of iodin and tincture of conium from the surface of steaming, hot water.

4. Strict silence must be enforced.

5. Give small doses of mercury internally and direct patient to inhale small amounts of the fumes of gray powder.

THE SINGER MURDER.

Many will wonder at the circumstances attending the murder of Miss Singer in Chicago. Here we see a man taking a woman's life, plundering her of a paltry sum and a few clothes, leaving the body without an effort at concealment, and setting out on a trip through neighboring parts, winding up at his parents' home.

The remarkable features of the crime are, the wholly inadequate motive, the absence of all effort at concealment, and the irrational course of the murderer leading him to the locality where he would be most surely watched for. Then when he was apprehended and had confessed the crime, came his appalling callousness, his light-hearted joking over it! This also in a man who had not been known as an imbecile, a dement, or a paranoiac, dangerous through his low degree of mental development.

To those who have made a study of criminology, however, there is a ready explanation of a situation that fifty years ago would have been not only incomprehensible but impossible. The solution of the problem requires but one word—cocaine.

We have here a typic illustration of that appalling destruction of the moral sense that characterizes the confirmed cocaine habitue. No other known drug has the power of completely abolishing one of the highest functions of the human mind, of extinguishing conscience, of depriving a man of his soul and yet leaving him alive. Alcohol may brutalize a man until his œdematous brain becomes incapable of sentiment, volition or consciousness, yet the man is not left capable of intelligent converse, telling a good story and appreciating humor—in a word, sane and normal to any but expert scrutiny. Morphine dominates its victim, so that he will lie, steal or murder, to obtain the drug; but his conscience remains acutely active, and the agonies of the terminal stages are heightened by his remorse. To the last the slave rebels and struggles for freedom. "If I cannot live without morphine I will not live with it," exclaimed one of these unfortunates, and in a week he was dead. The

cocainist has not the slightest intention of quitting the drug, or compunction over any crime that may occur to him.

THE FUNCTION OF THE FAMILY PHYSICIAN.

In this day of specialism and specialists, we occasionally hear some one deploring the passing of the family physician; and while it may be, and doubtless is, true that this individual is not the "all in all" that he used to be, it is also true that there is, was, and always will be a place in the sys tem of things which he, and he only, can fill.

By the term "family physician" I do not alude to the specialist in internal medicine any more than to any other specialist, but to the man who is the general family adviser of his various clients. He must be a good, all-round man; an acute and competent diagnostician, both of medical and surgical conditions; an exact and skillful therapeutist; a psychologist of parts; and a diplomat at all times. In his professional relations the sphinx must be loquacious in comparison with him; and he must have sinned and suffered enough so that his sympathies and understanding will be catholic and all-inclusive.

He need not be a surgeon, nor a practical pathologist, nor deeply versed and experienced in some of the lines of his profession which require a delicate and hard-earned manual technique; but he must make up for any lack in these directions by a diagnostic skill which will enable him to recognize *at once* when the necessity arises for the services of any of these special workers.

In more than half of his cases his function is that of a confessor and adviser; mankind (particularly women) is prone to confess to some one, and, as the consolations of the Romish confessional are not available to every one the family physician becomes the receptacle for the griefs and fears, the remorses and despairs, the doubtings and questionings of his clients; and upon his ability to dispense comfort and encouragement, absolution and hope, faith and instruction to his patients depends his success in his chosen work.

Few of his patients need much medicine; fewer still require surgical treatment; but they all need *advice*—kind words, gently spoken, or the ringing rebuke in no uncertain terms—they all come to him for *help*, and he must not fail them. Nor must he, in remembering all these things, forget that there is frequently a basis of altered function or structure lying at the root of some of the abnormal psychic states with which he has to deal, nor fail to recognize, promptly, when such is the case and apply the appropriate remedial measures, or call in such expert advisers and helpers as may be nocessary.

If he be practicing in the country, far from the facilities of the modern hospital, he must be, in addition to all the things heretofore mentioned, a minor surgeon, a skilled obstetrician and gynecologist, an accurate and rapid laboratory worker, a sanitarian, and a man of great physical vitality; possessing enormous internal resources and an insatiable thirst for knowledge, and a love and enthusiasm for his profession which is the guiding power of his life.

Such a man, I submit, is the highest type and representative of our ancient and honorable fraternity, rather than the expert in one organ or set of organs, useful and indispensable though he may be in this year of grace; and there will always be room, and rewards, and the love and honor and respect of men and women and children, for such a man; and his bier will be bedewed with the tears of those who will miss him—the noblest jewels which can ever rest upon the bosom of a man.

WAYS OF THE WOOD.

It's hard times in the wood when wolf eats wolf.

Now for example, there is Doctor Growler and Doctor Howler.

Years ago they were Doctor Smith and Doctor Brown.

They located in the same town at about the same time.

Doctor Smith got the first case.

A boy had fallen from a tree, and a fracture of the humerus was the result. Dr. Smith had treated it properly, but the nerves had been caught in the callus. The structures in the forearm began to undergo atrophy.

The case came to Dr. Brown.

Here was an opportunity to best his rival, and he did not hesitate. Extensive litigation followed, and the little town was divided. The ending of the suit has nothing to do with this story.

The first case which slipped from the hands of Dr. Brown gave Dr. Smith a chance to play even. He did much more than this.

For fifteen years they played this game. Long, gaunt wolves that they were, wrestled in cruel combat, each seeking a chance at the throat of the other.

At length the end came.

This is how it happened.

Young Doctor Jones located in that town.

The wolves hesitated, intending to resume the conflict but caring not to have this third exist among them.

They tried the same tactics with him.

He smiled but gave no heed.

The people were tired of the wolves and turned to him. He prospered.

He does the work in that community.

But the two old woves continue to snarl and snap at every opportunity.

It's hard times in the wood when wolf eats wolf.

North Carolina Medical Society Meeting.

The next meeting of the North Carolina Medical Society will be held in Morehead City, June 10th. Please note change in date.

The date of the meeting of the North Carolina Medical Society having been changed it becomes necessary to change the date of meeting of the Board of Medical Examiners from June 10th to June 3rd, 1912.

BENJ. K. HAYS,
Oxford, N. C. Sec.-Treas.

Rowan County Board of Health.

At a recent meeting of the Rowan County Board of Health two new members were elected, Dr. H. T. Tranthum and Dr. W. L. Crump. Dr. E. W. Currie was elected county superintendent of health.

BOOK NOTICES.

The Practice of Gynecology. Fifth Edition, Thoroughly Revised. A Text-Book on the Practice of Gynecology. For Practitioners and Students. By W. Easterly Ashton, M.D., LL.D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Octavo of 1100 pages, with 1050 original line drawings. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, $6.50 net; Half Morocco, $8.00 net.

Four editions of Dr. Ashton's work have been demanded within the last four years. This is sufficient evidence that the work is very valuable and has met the great need of the practitioner.

The author not only tells his reader in every instance what should be done, but also precisely how to do it. A large number of new subjects have been treated in this edition. There are now 1058 original line drawings.

The binding of this work shows that the publishers have spared no pains along this line. The illustrations are numerous and carefully selected.

Diet and Hygiene in Diseases of the Skin. By L. Duncan Bulkley, A.M., M.D., Physician to the New York Skin and Cancer Hospital; Consulting Physician of the New York Hospital; Consulting Dermatologist to Randall's Island Hospital, to the Hospital for Ruptured and Crippled, and to the Manhattan Eye and Ear Hospital, Etc. 8vo., Cloth, 194 pages. $2.00 net. Paul B. Hoeber, Medical Publisher, Bookseller and Importer, 69 East 59th Street, New York, 1913.

This work is composed of a series of lectures. In preparing these lectures the author had in view to add scientific support to the vast and ever increasing literature dealing with chemistry of foods and nutrition.

The author has so constructed this work until it will be easy for a layman to understand his meaning. There have been great volumes written on Diseases of the Skin, but we consider this one of the best we have noted recently concerning Diet and Hygiene in connection with skin diseases.

The volume is well bound and each lecture is carefully indexed.

The Treatment of Diseases of Children. By G. A. Sutherland, M.D., F.R.C.P., Physician to Paddington Green Children's Hospital, and to the Hampstead and North-west London Hospital; Late President, Section for Diseases of Children; Royal Society of Medicine. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E. C. 1913.

In this edition the author has followed out the same plan as in the first, namely, to make the book a practical guide to the young practitioner in his treatment of the diseases of infancy and childhood. New sections have been added on the acute specific fevers and on diseases of the skin.

The author has treated this subject in a most concise manner, and it will be found very useful to the busy practitioner.

The volume is very attractive in its neat binding, and the work shows no lack of pains on the part of the publishers.

Medical Men and the Law. A Modern Treatise of the Legal Rights, Duties and Liabilities of Physicians and Surgeons. By Hugh Emmett Culbertson, of the Ohio and New York Bars; Contributing Editor to the Laning Ohio, "Encyclopædia Digest;" "Notes on the American Decisions and Reports," and many other legal publications. Lea & Febiger, Philadelphia and New York. 1913.

The author has endeavored to deal with

all the main features in the modern law pertaining to physicians and surgeons. Obviously, it is not intended in any way to interfere with existing text-books known under the title of medical jurisprudence, but rather to supply the want, which many other persons have long felt, of a work of this character.

This volume contains chapters on the following subjects: Who May Practice Medicine and Surgery; Relation of Physician to Patient; Compensation; Malpractice of Negligence; Criminal Liability of Physicians and Surgeons; Exemptions of Physicians and Surgeons; Physicians and Surgeons as Witnesses; Right to Protect Professional Reputation; Validity of Contract Restricting Exercise of Profession; Wills.

This book is substantially bound, and the material used in its make-up is of a very high grade..

A Handbook of Practical Treatment. In three volumes. By 82 eminent specialists. Edited by John H. Musser, M.D., Professor of Clinical Medicine, University of Pennsylvania; and A. O. J. Kelly, M.D., Late Assistant Professor of Medicine, University of Pennsylvania. Volume III. Octavo of 1095 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1912. Per volume: Cloth, $6.00 net; Half Morocco, $7.50 net.

The contents of this volume are divided into seven parts as follows: Constitutional Diseases; Diseases of the Respiratory System; Diseases of the Digestive System; The Urinary System; The Nervous System; The Muscles; Diseases of the Mind.

The best therapeutists of England and America have contributed to this volume, and it is a work of unsurpassed value to the medical profession. Not only is drug therapy presented, but all other means of treating disease are also fully detailed. The technic for Ehrlich's "606" is completely given.

This volume is beautifully bound and the illustrations are numerous and of a very high type.

Diseases of the Stomach, Intestines, and Pancreas. By Robert Coleman Kemp, M.D., Professor of Gastrointestinal Diseases, New York School of Clinical Medicine. Second edition, revised and enlarged. Octavo of 1021 pages, with 388 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, $6.50 net; Half Morocco, $8.00 net.

There are several new subjects which have been introduced in this second edition, notably chapters on Colon Bacillus Infection and on Diseases of the Pancreas. The section on Duodenal Ulcer has been rewritten.

It has been the author's endeavor to furnish the general practitioner with a working knowledge of the subject, and to select for him from the great accumulation of material the most practical methods. This work is in every sense up-to-date, and we are glad of an opportunity to call the attention of our readers to so valuable a work.

The volume is substantially bound, carefully indexed, and the illustrations are very numerous, and also very clear and add much to the value of the work.

Minor Surgery. By Leonard A. Bidwell, F.R.C.S., Senior Surgeon to the West London Hospital, Dean of the Post-Graduate College, Consulting Surgeon to the Blackheath and Charlton Hospital and to the City Dispensary and author of "Handbook of Intestinal Surgery." Second Edition. Revised and Enlarged. With one hundred and twenty-nine illustrations. London: University of London Press. Published for the University of London Press, Ltd., by Hodder & Stoughton and Henry Frowde.

The fact that the second edition of this work has become necessary within twelve months of the publication of the first is sufficient indication that it has met a need.

This work lays down definite and distinct lines of teaching which admit of no ambiguity; it combines the useful features of conciseness and detail, and thus enables the reader to gather definite information without inordinate expenditure of time and trouble.

This little volume is quite complete, and will be of great value to the profession.

The Grand Opera Singers of To-Day. By Henry C. Lahee, author of "Famous Singers of To-Day and Yesterday," "Grand Opera in America," "Famous Pianists of To-Day and Yesterday," etc. L. C. Page & Co., Boston, 1912.

This book contains accounts of the leading operatic stars who have sung during recent years, together with a sketch of the chief operatic enterprises.

The cuts used in this volume are of the very highest type made.

The volume is well bound, and will be of great interest to theatre-goers.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert H. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Assistant Professor of Clinical Medicine, University and Bellevue Medical College. Third Revised Edition. Octavo of 639 pages,

339 illustrations. Philadelphia and London: W. B. Saunders Company, 1912. Cloth, $5.00 net; Half Morocco, $6.50 net.

It has been the purpose of the writers to present in this volume a discussion of the more important disease conditions of the uro genital tract taken from the standpoint of the general practitioner and surgeon.

The authors have devoted the greatest amount of space and the fullest descriptions to those conditions and methods which have appeared to them to be of the greatest importance, or to those which, being of recent development, may be presumed to be less familiar to the practitioner.

Both the medical and surgical aspects of these diseases have been carefully considered in this volume.

The illustrations contained in this book are unusually instructive and valuable, and will be found of material aid, especially to the surgeon.

The binding is substantial and quite attractive.

Diagnostic and Therapeutic Technic. By Albert S. Morrow, M.D., Adjunct Professor of Surgery, New York Polyclinic. Octavo of 850 pages, with 815 original line drawings. Philadelphia and London: W. B. Saunders Company, 1911. Cloth, $5.00 net.

It has been the author's endeavor to bring together and arrange in a manner easily accessible for reference a large number of proceedures employed in diagnosis and treatment.

The scope of work covered in this volume can be best appreciated by the following outline of its contents: I. The Administration of General Anesthetics; II, Local Anesthesia; III, Sphygmomanometry; IV, Transfusion of Blood; V, Infusions of Physiological Salt Solution; VI, Hypodermic and Intramuscular Injection of Drugs; VII, Bier's Hyperemic Treatment; VIII, Collection and Preservation of Pathological Material; IX, Exploratory Punctures; X, Aspirations; XI, The Nose and Accessory Sinuses; XII, The Ear; XIII, The Larynx and Trachea; XIV, The Esophagus; XV, The Stomach; XVI, The Rectum and Colon; XVII, The Urethra and Prostate; XVIII, The Bladder; XIX, The Kidney and Ureters; XX, The Female Generative Organs.

Dr. Morrow's book is decidedly a work for the physician in general practice. It tells just how to perform those procedures required of every physician daily; and it does so in a way never before approached for clearness, directness and simplicity.

This volume is well bound, and the illustrations are particularly good.

Treatment After Operation. By William Turner, M.S., F.R.C.S., Senior Surgeon to the Dreadnaught Seamen's Hospital, Greenwich; and E. Rock Carling, B.S., F.R.C.S., Surgeon to the Dreadnaught Seamen's Hospital, Greenwich. With a chapter on the Eye, by L. V. Cargill, F.R.C.S., Senior Ophthalmic Surgeon and Lecturer in Ophthalmology, King's College Hospital. London: University of London Press. Published for the University of London Press, Ltd., by Hodder & Stoughton and Henry Frowde.

This volume has been written almost entirely without reference to other books; no attempt has been made to include varieties of method or to indicate differences of opinion.

This work seems to be quite up-to-date, and includes many helpful suggestions to house-surgeons, senior students and nurses.

We are glad of an opportunity to recommend a work of medium size, which is direct and concise in its teachings, to our readers.

In its neat binding, and with its numerous illustrations, this book is quite attractive.

Diseases of Women. By Thomas George Stevens, M.D., B.S., (Lond.); Obstetric Surgeon, with Charge of Out-Patients, St. Mary's Hospital, Paddington, Surgeon (Gynæcological) The Hospital for Women, Soho Square; Physician to In-Patients, Queen Charlotte's Lying-In Hospital; Examiner to the Central Midwives' Board. With 202 Illustrations. London: University of London Press. Published for the University of London Press, Ltd., by Hodder & Stoughton and Henry Frowde.

This small volume gives in a very concise manner all the fundamental principles of Diseases of Women. Of course the larger volumes on this subject may go more into the details of the subject, but we feel that this is a work that will meet a great demand in medical literature.

The following subjects are carefully considered in this volume: Diagnosis; Pain in Diseases of Women; Anatomy; Development of the Generative Organs; Malformations of the Generative Organs; Menstruation; Anomalies of Menstruation; Infections of the Generative System; Pathological Effects of Parturition and Accidental Injuries; Displacement of the Pelvic Organs; Disturbances of the Sexual Functions; Anomalies of Pregnancy; The Urinary System in Relation to Gynæcology; General Conditions Associated with Pelvic Disorders; New Growths of the Generative System Including Cysts; Preparations for an Operation and Technique; After-treatment of Opera-

tions; Post-operative Complications.

The book contains 431 pages of reading matter.

Health and Longevity Through Rational Diet. Practical hints in regard to food and the usefulness or harmful effects of the various articles of diet. By Dr. Arnold Lorand, Carlsbad. Philadelphia: F. A. Davis Company, Publishers, 1912.

This is a work worthy of study. The author displays an unusual knowledge along lines of dietetics. The methods of eating outlined in this book are both sensible and rational.

We take great pleasure in recommending this work to our readers.

The book is nicely bound and carefully indexed, showing no lack of pains on the part of the publishers.

Diseases of the Eyes. By C. Devereux Marshall, F.R.C.S., Surgeon to the Royal London (Moorfields) Ophthalmic Hospital and Ophthalmic Surgeon to the Victoria Hospital for Children, Chelsea. Fully illustrated. London: University of London Press. Published for the University of London Press, Ltd., by Hodder & Stoughton and Henry Frowde.

This book is chiefly designed for the use of students and those practitioners who, while doing a certain amount of eye work, cannot be considered as experts. With this object in view, the author has produced a most practical volume of a medium size, which will be of great value to the medical profession.

The Edridge-Green theory of light and colour vision has been explained at length, and in a clear and concise manner.

This volume is well bound and carefully indexed. The illustrations show much thought on the part of the author.

The Diseases of the Skin. By Willmott Evans, M.D., B.S., B.Sc., F.R.C.S., Surgeon to the Royal Free Hospital, and Surgeon to the Skin Department, Royal Free Hospital; Senior Surgeon to the Hospital for Diseases of the Skin, Blackfriars. With thirty-two illustrations. London: University of London Press. Published for the University of London Press, Ltd., by Hodder & Stoughton and Henry Frowde.

This book is intended to provide an introduction to the study of the diseases of the skin, and therefore the descriptions have been written in as simple a style as is compatible with correctness.

The illustrations are numerous, and add much to the value of this work. This book will be found of great worth to the medical student, and general practitioner.

Its attractive appearance shows that there has been no pains spared on the part of the publishers.

Safeguarding the Special Senses. General advice regarding the use of the eyes, ears, nose and throat. By Henry O. Reik, M.D., Formerly Associate in Ophthalmology and Otology in the Johns Hopkins University and Surgeon in the Baltimore Eye, Ear and Throat Hospital, Baltimore, Maryland. Illustrated. Philadelphia: F. A. Davis Company, Publishers, 1912. Price 75c.

This little volume is full of helpful advice for the practitioner, and also for the laymen. It is one that should be read by all parents. It shows how to properly care for the child's senses as well as that of adults. If the contents of this little volume could be lain upon the minds of the general public there would be less work for the Eye, Ear, Nose and Throat specialist,

The book is neatly bound and is quite attractive in its appearance.

Transactions of the Thirty-fourth Annual Meeting of the American Laryngological Association held at Atlantic City, N. J., May 9th, 10th and 11th, 1912. New York: Published by the Association, 1912.

This volume contains the papers read before this association meeting and also the business transactions. It contains many very valuable articles by the most celebrated physicians in this country.

The binding is substantial and it is indeed an example of the great work this organization is doing.

The illustrations used in the different articles are of no little importance.

Is Alcohol Hurtful or Helpful?

"The question as to the propriety of using alcohol habitually has a most important moral side, but with this the physiologist does not deal; the physical side, i.e., whether such use is helpful or hurtful, alone claims his attention," says Dr. Horacio C. Wood, the eminent physician and author, in the February Lippincott's. "As on the witness stand, in court, my answer to the question as to the practical food value of alcoholic drinks shall precede the explanation, The answer is, the habitual use of moderate alcohol draughts may be helpful or it may be most harmful, the diversity of result depending upon the circumstances of the individual involved.

"I have been actively engaged in the practice of medicine for more than forty years, and my experience is, that the majority of deaths of men between the ages of fifty and sixty-five years are due to one or

more of the three following causes: early sexual dissipation, the use or abuse of alcohol, and excessive eating. Of these, probably the most common and deadly physical sin is that of overeating. At least, among Americans in good financial circumstances, I should estimate its death-harvest as the largest of the three. In India, on the other hand, the funeral palm belongs to undereating; When the habitual overeating is combined with the use of alcohol, then the two co-acting forces are most deadly in their effects.

"When the Norwich Union Life Insurance Company of England opened its offices in Italy, it was found that if the alcoholic limitations used by the company were adhered to no business could be done. Directed by the company, Dr. W. W. Baldwin, then the chief Anglo-Saxon practitioner upon the peninsula, examined into the matter and reported that the habit of the lower and middle classes of Italians was to take for each of the three daily meals a quart of native wine and a large dish of macaroni, animal foods scarcely appearing in the diet. Under such daily routine meals are enjoyed and physical strength is preserved, yet drunkenness is most rare, and, according to Baldwin, alcoholism never appears and gout or gouty degenerations are almost unknown. On the other hand, when the Anglo Saxon, German, or other northerner settles in Italy, and adopts the wine habits of the Italian, maintaining his old eating habit, terrible gouty degenerations appear usually within one or two years. A similar thing may be seen in Germany. The poor man in Munich takes his family of an evening to the Lowenbrau, where for a few *pfenniges* he not only enjoys magnificent military music, but obtains also radishes, brown bread, and excellent beer. On this the family sups with the enjoyment that a prince might envy. Later, perhaps, the industrious husband accumulates riches, and Schinken and Wurst and other *delicatessen* grace the family table, whereupon gout drags Hades up to earth.

"In Europe the lower classes are underrather than over-fed. So it is that he who would deprive the poor European peasant of his soup or wine or beer would take away from the peasant's meal that which gives zest to it, and by stimulating appetite and stomach aids in the digestion ot the coarse food, and at the same time supplies to the body fuel which is lacking in the frugal repast. Such a reformer would increase the hardness of an already hard lot and diminish the life average. On the other hand, he who advocates the habitual use of alcoholic drinks by Americans not only directly by increasing the amount of food ingested but also indirectly by stimulating appetite and digestion adds to the food-burden which may be already causing widespread degenerations in heart, arteries, and kidneys."

Modern Terminals and Labor-Saving Appliances on the Mississippi.

The antiquated and expensive methods of loading freight at our inland ports are to give place to the labor-saving devices in use on European rivers.

There municipalities and private corporations have built modern terminals at the river towns and cities, equipped with every known device for expediting and cheapening the handling of freight. Such terminals are now maintained at New Orleans, where the handling charges approximate fifteen cents a ton, and, being publicly owned, they invite competition in river traffic. At Davenport, Rock Island, Burlington, Muscatine, and other Mississippi River ports such terminals are now practically assured and will also undoubtedly be established at Minneapolis. The old-style Mississippi River steamboat will be discarded and the freight carried as on continental waterways in fleets of barges, of about one thousand tons burden each, propelled by a power boat.

In a few years, therefore, it is not improbable that part of the commerce of the Great Lakes will be diverted to a new channel and that the upper Mississippi now only occasionally traveled by some old sidewheeler or still more antiquated sternwheler, will be alive with modern transports bearing the wheat of the prairies and the products of the mills to the South and the coal of Illinois to the Twin Cities.—From "Preparing the Upper Mississippi for Modern Commerce," by W. C. Tiffany, in the American Review of Reviews for February.

Abstracts of the Leading articles of the month.

Mixed Narcosis.—Embley (Australian Medical Gazette) says:

1. The purposes for which morphine, atropine, and scopolamine are used in mixed narcosis appear to be justified, with the exception of the employment of atropine and scopolamine, to compensate the respiratory depression caused by morphine.

2. Morphine depresses respiratory efficiency. In some instances this is much more marked than in others.

3. Neither atropine nor scopolamine compensates the respiratory depression caused by morphine. Both possess the property of

augmenting respiratory efficiency in the normal animal, but in the severe forms of depression of morphine they are incompetent, whilst in the milder forms the augmentation is of too short duration to be of service in clinical usage.

4. During employment of the closed method of mixed narcosis, respiratory depression does not occur. When marked respiratory depression occurs in the open ether method of mixed narcosis the closed method should be substituted Should marked respiratory depression be found to continue after the operation and to cause anxiety, CO_2 should be administered, much diluted, in the inspired air.

5. If the dosage of morphine be confined to the lowest useful limit—say the 1/6 to 1/8 grain for adults and the usual dose of atropine, say 1-100 to 1-150 grain, or scopolamine 1-100 to 1-150 grain—and the anesthesia by open ether be not carried to too deep a level, marked respiratory depression will rarely occur.

6. In the small minority of cases in which morphine causes marked respiratory depression, it is due to abnormal innervation of the respiratory mechanism. In such cases even the smallest serviceable quantity of morphine will produce this depression.

7. Omnopon (the total alkaloids of opium) appears to offer a way of obtaining the advantages of morphine in mixed narcosis with a diminished risk of respiratory depression.

8. In the mixed narcosis of chloroform, respiratory depression is apt to be absolute and persistent in those cases of abnormal innervation. Such cases are not necessarily dangerous, providing that artificial respiration be maintained till autonomic breathing returns. The administration of CO_2 during artificial respiration is the best treatment. The CO_2, of course, should be used so that some approximation to 5 per cent. be inspired intermittently.

9. Clinical experience of omnopon, scopolamine, nitrous oxide and oxygen with ether, favorably impresses one. The after-effects are much less and the patient proportionately less unhappy on recovery. Much less ether is used than by other methods.

The Local Application of Salvarsan in Chronic Superficial Glossitis.—Allport in the British Medical Journal mentions the case of a man aged fifty, who gave no history of lues, who had had a sore tongue for twenty years. The patient was a heavy smoker, and he presented a raised, circular growth near the left of the middle line upon the dorsum of the tongue, surrounded by a sulcus. The edges were somewhat hard. The left margin of the organ was ulcerated and eating was difficult. A portion of the growth was examined microscopically, and it was reported to be of a suspicious character, though there were no definite proofs of malignancy. The patient was then put on iodide of potassium and mercury, and the growth was cautiously painted with various caustics. The man became worse, and it was thought at one time advisable to remove the diseased area surgically. However, a trial was made with the local application of salvarsan, and on May 7, 1912, the tongue was well swabbed over with a solution of this substance of glycerine—0.1 gramme of salvarsan in half a drachm of water and half an ounce of glycerin. The patient was given the solution with instructions to swab the area every hour for ten hours for one day. In three days' time there was manifest improvement in the local condition. The same treatment was renewed May 10, 14, and 21. At the end of three weeks after the first application all the ulcers were completely healed, and the whole tongue looked much more healthy. Some induration still persisted about the site of the original nodule. The patient had no symptoms of poisoning. It was remarkable that such a rapid change was brought about in a condition that had lasted for twenty years, especially when the lesion was not a bit benefited by iodides or mercury.

On the Value of a Quantitative Albumen Estimation of the Cerebrospinal Fluid.—Greenfield, in The London Lancet, calls attention to a valuable diagnostic means, especially from the standpoint of the surgeon. The Dr. uses a modification of Noguchi's butyric acid reaction. Two Cc. of cerebrospinal fluid and 5 Cc. of butyric acid are boiled together. One Cc. of normal sodium hydrate is then added and the tube again boiled, when a flocculent precipitate is thrown down. The result of the test is poured into a graduated centrifuge tube, which gives readings to 0.1 Cc. with fair accuracy; each 0.1 Cc. by this method is equivalent to 0.0.25 per cent. Normal fluids give readings of 0.05 to 0.2 Cc. per 1000. Uncomplicated syphilitic meningitis and parasyphilitic disease gave readings of 0.6 Cc , or 1.5 per 1000. In many cases of syphilitic nervous disease, even when lymphocytosis was present, no increase of the albumen content was found, probably incident to the fact that the disease was mainly vascular, or that the meningeal disease had subsided. The albumen content may be raised in tabes dorsalis to as high a degree as in any case of general paralysis. In chronic cases it was often not above normal. As to the cytological examination, any count above 15 in a high-power field of a thoroughly centrifuged

preparation is regarded as pathological, and apart from meningitis appears to be pathognomonic of syphilitic or parasyphilitic disease. Most cases of brain tumor give a practically normal albumen content. Exceptionally it may be very high. In the spinal tumor the fluid may be highly albuminous.

The writer says that the finding of a high albumen content in the cerebrospinal fluid seems to be in almost every case an indication for operative treatment. Where the cause is syphilitic meningitis much good may be done by promoting free circulation of the cerebrospinal fluid to the lumbar segments of the cord, and where a level of anesthesia or paraplegia is found the operation is frequently followed by very good results. In such cases a cyst of fluid is often found at the operation, pressing on the cord and practically acting as a tumor.

Apart from syphilitic cases the diagnosis is limited to spinal tumors, or other compression paraplegia, where the clinical history would make the diagnosis simple. Pachymeningitis cervicalis hypertrophica might possibly cause a similar condition of the fluid, and in this condition, as shown by Horsley's results, operative treatment is often extremely beneficial.

Considered as a diagnostic sign of spinal tumor, examination of the cerebrospinal fluid seems to have been too much neglected, and in the absence of other evidence may be of the greatest value.

The Operative Treatment of Fractures of the Long Bones in Children.—Sampson, in The London Lancet, reports the results of the operative treatment of fractures according to Lane's method as employed in his service. Seventy-two children, varying from one month to twelve years, with fractures of the long bones were subjected to operation and in no instance did wound infection result. The mortality was nil and radiograms in two planes at right angles to each other were taken both before and after treatment in all cases. A metal plate was used for fixing the fragments in sixty cases and subsequent removal was necessary on two occasions. In one case the plate caused a projection beneath the skin of the forearm in a position liable to frequent injury and friction and was removed two and one-half months after operation. In the other case an un-united fracture of the tibia of five months' standing was found with both ends of the bone atrophied and the lower fragment a mere shell. Recent fractures from subsequent examinations show that perfect results were obtained in over 88 per cent. of the cases, mal-united and un-united fractures giving a perfect result in over 37 per cent., which is claimed by the writer to furnish a strong argument in favor of the adoption of early operative measures as a routine procedure, because if resorted to after mal unition has taken place the chances of a perfect result are greatly diminished. Perfect function resulted in 97 per cent. of recent fractures and in 50 per cent. of mal-united and un-united fractures. In view of the results a more extended adoption of Dr. Lane's methods for the treatment of simple fractures is urged.

Blood Pressure in Scarlet Fever.—Rolleston (Brit. Jour. Child. Dis.) reports 122 cases of scarlet fever with C. J. Martin's modifieation of Riva-Rocci's sphygmomanometer and are confined to systolic pressure. In this series the blood pressure was found to be subnormal in 25 per cent., the extent and duration of the depression being as a rule in direct relation to the severity of the initial attack. In the great majority the highest readings were found in the first week; there was also a predominance of the lowest readings in the same week, but in a large minority the lowest readings were found in the second week. The normal tension was usually re-established by the fourth week. In the majority of cases the blood pressure was lower in convalescence than in the acute stage. In 48.4 per cent. of the convalescent cases the readings in the recumbent and erect positions were the same, or the recumbent was higher than the vertical record until convalescence was firmly established (hypotension of effort). With the exception of nephritis, complications had little, if any, effect upon the blood pressure. In only a minority of the nephritis cases—twelve out of thirty-three—was the blood pressure above normal, and the hypertension was never extreme nor of long duration. Sphygmomanometry in scarler fever, as in most of the other acute diseases, is of little practical importance in the acute stage, but in convalescence may give some indication of the severity of the renal lesion which may be of value in subsequent treatment of the patient. Pronounced arierial hypotension, especially if accompanied by other signs of acute suprarenal insufficiency, should be treated by adrenalin or suprarenal extract.

Idiocy and Congenital Syphills.—Dean (Brit. Jous. Child. Dis.) says that only a small proportion of idiots show the classical signs and symptoms of congenital syphilis, and if we are restricted to the usual methods of examination we must come to the conclusion that congenital syphilis has little connection with idiocy. However, in examining 330 of the inmates of the Wilhlemstift, an asylum for idiots at Potsdam, a

positive Wassermann reaction was obtained by the writer in fifty-one cases (15.4 per cent.). Among thirteen parents of children giving a positive reaction, nine were found to give a positive reaction. A grouping of the 330 cases according to age appears to show that the percentage of positive results diminishes rapidly after the sixteenth year, and that a larger percentage of positive results might be expected from the examination of a series of very young cases. It seems possible that the very contradictory results already published may be reconciled by taking the age-factor into consideration. Of the fifty-one cases in which a positive serum reaction was obtained only seven showed conclusive evidence of congenital syphilis from a clinical standpoint. They are, in fact, cases of latent syphilis, and during the latent stages of the acquired disease only some 40 to 50 per cent. of the patients give a positive reaction. The writer thinks that the actual percentage of positive results obtained by examining a series of idiots by the serum test comes very far short of the number which are actually infected. If this assumption is correct, we shall have to recognize syphilis as the causative factor in a very considerable percentage of cases of idiocy. If this can be established it is reasonable to hope that very great success will follow the application of therapeutic and prophylactic measures.

The Dyspepsias of Children after the Period of Infancy.—Dr. Hutchison, in The London Lancet, says dyspepsia in childhood is necessarily a wide and ill-defined subject, but it might be subdivided into three classes: (1) gastric, (2) intestinal and (3) hepatic dyspepsia. Clinically, combinations of these varieties might be met with. With regard to gastric dyspepsia, organic disease was rare in childhood, apart from acute gastritiis. Chronic gastritis was frequently diagnosed, but it was probable that careful test meal investigation would show that many of the cases were due to some form of functional disorder.

Disorder of motility was the commonest cause, and might be inferred in those cases in which a splash could be elicited over the stomach some hours after a meal. The patients were usually of poor physique, badly nourished, and suffered from abdominal pains and mental depression. The condition was commonly spoken of as "mucous disease," and X-ray investigation should be a profitable line of research. Hyperæsthesia was the most probable disorder of sensibility, and while it might account for some of the cases of pain referred to the upper abdomen it was extremely rare. Intestinal dyspepsia was characterized by flatulence, colic, and derangement of the bowels, and comprised cases of fever of intestinal origin; the majority of cases of dyspepsia in childhood came under this head. The pathology was obscure, but there were three possible causes: (1) defect of certain digestive ferments; (2) the presence of an abnormal intestinal flora; (3) a diet containing excess of one class of nutritive constituent—probably carbohydrate. The great benefit obtained frequently in these cases by rigid limitation of carbohydrates strongly favored this view. Hepatic dyspepsia might be inferred when dyspepsia was accompanied by a deficiency of coloring matter in the stools. These children seemed especially liable to suffer from periodic vomiting, migraine, and bilious attacks. The condition might be due to a functional arrest of bile secretion, but the pallor, as in "cœliac disease," might be due to diminished absorption of fat concealing the presence of bile pigment. The benefit obtained in these cases by limitation of fat and carbohydrate in the diet would suggest that the disorder might be due to overloading of the hepatic cells with fat and glycogen. In the etiology of dyspepsias in childhood congenital predisposition played a large part. Children of neurotic families had difficulty in digesting milk in infancy, and in later childhood continued to exhibit dyspepsia in various forms. Many had the narrow subcostal angle, feeble muscular development, etc., characteristic of Stiller's "morbus asthenicus." In later life they tended to be neurasthenics and nervous dyspeptics. Dr. Hutchison had not been able to trace any connection between dental caries and dyspepsia. Defective mastication and bolting the food was, however, undoubtedly a frequent cause. Of dietetic causes excessive use of carbohydrates was the chief; such a diet was bulky and fermentable, and made great demands on the digestive ferments; it might also be deficient in proteins. Physical and mental strain, over-anxiety about lessons, etc., also played a part in sapping the strength of children and promoting dyspepsia. In the matter of treatment it was important, first, to regulate the whole environment of the child—the hours of work, of play, and of sleep. Change of air was often a great advantage. Dietetic rules were secondary to general hygienic measures; proper regulation of meals and education in mastication were required, and the carbohydrates must not be over-represented in the diet. Drug treatment was of minor importance; aperients and iron, malt and cod-liver oil, were of most advantage.

Fractures of the Humerus in the Child.—Savariaud (Jour. de med. de Paris) says that of all fractures in children, those of the humerus are the most frequent. At the upper extremity transverse fracture of the humerus may occur at the point of insertion of the pectoralis major muscle. The deformity is so great that even under chloroform it is difficult to make it entirely disappear. Abduction may remain limited, but adaptation of the movements of the shoulder-blade and thorax will take place that will render operation unnecessary. The fragment of the diaphysis may remain prominent under the deltoid and strike against the acromion. As the bone grows in length this prominence will be carried further from the shoulder-joint and contact will cease, the movements becoming normal. Such a prominence has been mistaken for an osteosarcoma. Fractures of the diaphysis of the humerus are of very simple treatment in the child. Obstetrical fracture in the newborn may be treated by a simple pad and bandage confining the arm to the side of the body. The same treatment may be used in all young children. Fractures of the lower extremity of the humerus are frequent, and complications are many and important. In fracture above the condyles the displacement may be slight, or very great. The upper fragment is pushed forward, lifting the vessels and nerves, and the lower is displaced far back, simulating a luxation. To differentiate we know that dislocation is as rare as fracture is frequent; in fracture there is an ecchymosis in the fold of the elbow transverse and linear. Great abnormal mobility is accompanied by crepitus; in fracture the prominence at the fold of the elbow is small, while in dislocation it is large and rounded. The three points of prominence, condyles and olecranon, retain their normal relative positions. Lesions of the nerves may cause contraction of all the flexors of the fingers, or paralysis of the muscles of the forearm, due to traumatism of the nerves at the time of accident. If the fracture heals without replacement of the fragments the movements of flexion are arrested by the contact of the coronoid with the upper fragment. Reduction is obtained by traction on the semiflexed forearm and pushing the olecranon into place with the thumbs. The arm is then fixed in this position. If the fracture heals in a vicious position with prominences obstructing flexion these prominences may be chiselled off later. Compression of the nerves may demend operation to relieve paralysis. Traction and time may relieve contractures. The arm often deviates outward after healing. Fracture of the external condyle is frequent. The condyle, epicondyle and end of the trochlea are separated from the bone. In children from three to ten years of age a juxtaepiphyseal fracture occurs. The growing cartilage is involved and osteogenesis is affected later in life. This fracture results from a fall with the hand outstretched to save the body. The signs are not marked; the forearm is flexed at an obtuse angle, there are pain, ecchymosis, and crepitus over the epicondyle. Extension is less limited than flexion. Radiography is of great value in clearing up the diagnosis, by showing a clear spot at the point of the epiphyseal cartilage. After reduction immobilization should be maintained for two weeks, and then be followed by massege and passive movements. Fractures of the epitrochlea are of slight importance.

Treatment of Diphtheria.—Leary (Australian Medical Journal) says that he believes in the use of large doses of antitoxin in diphtheria. The Dr. says that in all severe nasopharyngeal cases, 50,000 units should be the initial dose. If the case is complicated with swollen glands, spreading membrane, signs of rapid and marked toxemia, 75,000 to 100,000 units should be administered as soon as possible. In infants with croup, or children with croup and faucial or nasal diphtheria the dose should be regulated never in accordance with age or by stamina (except specific), temperature or pulse, but by the number of days of invasion: If of forty-eight hours' duration 24,000 units at once; if complicated, or over three days, 30,000 to 80,000 units. In uncomplicated cases of two or three days standing 8000 to 12,000 units should suffice, carefully noting general condition and state of membrane.

The Influence of Age on Pregnancy.—Marek (Gynak. Rundschau) mentions the influence of age on the first pregnancy, labor, and puerperium, in a series of 1000 primiparæ who came under his personal observation. The Dr. says that this influence cannot be disputed. The number of miscarriages in elderly primiparæ is much less than usual, but the premature labors are unusually large. Albuminuria and the nephritis of pregnancy occur more frequently in proportion to the age of the patient and the course of these complications is likewise more serious. Eclampsia is also more common in older primiparæ, but the percentage of mortality is higher in younger women. The most frequent complication after labor in young primiparæ is atonic hemorrhage, but this is usually easily treated and without serious consequences. The most favorable time for the first labor is the period previous to the twenty-third year, as

the smallest number of complicating conditions during pregnancy, labor, and the puerperium are noted during this time. After the twenty-third year the number of abnormal labors increases. The principal cause of trouble in elderly primiparæ is due to uterine inertia and rigidity of the soft parts, which are apt to result in weak pains, premature rupture of the membranes, increase in operative interference, and heightened mortality of the mother and the child. The necessity for more frequent examinations, and either premature or delayed operative interference are also causes of future trouble, He says that in such women the pregnancy must be carefully watched and the labor preferably conducted in a hospital, The morbidity of the puerperal women also varies with the age, an increase being noted in the primiparæ. The effect of the age on the children was shown in the following observation: namely, that with advancing age of the mother a preponderancy of male children resulted, an increase in the number of pathological positions, and also in the number of dead or macerared fetuses.

Influence of the Age of the Mother on the Sex of the Child.—Ahlfeld (Monatsschr. f. Geburtsch. u. Gynak.) says that the proportion of male children in elderly primiparæ was 137 to 100 female babies, whereas the usual number was 106. He now contributes a further study based on 8000 cases of labor, among which were 280 mothers whose age was between thirty and forty-nine years, and among whose children were 151 girls and only 129 boys, a marked contrast to the previously obtained figures. Ahlfeld believes that the sex is decided in the ovum before fertilization. Under what circumstances either male or female ova are fertilized is still a matter of uncertainty. That the mother's age is evidently not a principal factor is shown by the differences obtained in the two series of statistics already quoted. It would appear to be necessary to make use of a much larger material. Ahlfeld considers, in view of the contradictory statistics, that we must revise our opinion about the larger proportion of male to female births in elderly primiparæ, and that the age of the patient is evidently not a factor in the matter.

Vaccines in the Treatment of Puerperal Sepsis.—Rowlette (Journ. of Obst. and Gyn. of Brit. Emp.) gives a resume of previous work dealing with the use of vaccines in the treatment of puerperal sepsis. During the past two years vaccines were employed in 54 cases in the Rotunda Hospital, in 39 of which the treatment was based on a bacteriological diagnosis. The diagnosis was made from lochia by Doderlein's method; the introduction to the uterus with the aid of a speculum of a bent sterile glass tube, suction then applied by a syringe, the withdrawn tube being sealed and sent to the laboratory. Thirty-one of the 39 cases were of streptococcal infection, the remaining eight of staphylococcal. The doses given were, in the case of streptococci, 2½ to 10 millions; in the case of staphylococci, 20 to 50 millions. Injections were given at intervals of 48 hours. The typical result of an injection was a drop in temperature and pulse occurring in from 12 to 36 hours. In streptococcal injections better results were got by combining the use of anti-streptococcal serum with that of the vaccine. Three deaths occurred in the streptococcal series. One patient was in advanced phthisis, another was moribund from gangrenous appendicitis when she entered the hospital; the third showed considerable improvement under vaccine treatment, but died from an abscess of the lung when the supply of autogenous vaccine had been exhausted. Of the staphylococcal series, one patient died of pyaemia, the result of thrombosis of the ovarian veins. Tables of the cases are given with charts showing special points. The author comes to the following conclusions: (1) Vaccines in small doses do no harm in puerperal sepsis; (2) in the majority of cases they do good; (3) in many cases they produce immediate and marked improvement; (4) autogenous vaccines are more trustworthy than stock vaccines, and sometimes succeed rapidly when the latter fail; (5) anti-streptococcal serum given simultaneously increases the effect of streptococcal vaccine; (6) to get the best results accurate bacteriological diagnosis is necessary.

Treatment of Uterine Myomata.—Marek (Monatschr. f. Geb. u. Gyn.) states that a marked change has recently occurred in the treatment of uterine myomata, Instead of the waiting policy that has held sway for so long, operation is indicated in most cases, as soon as marked symptoms of pressure or haemorrhage manifest themselves. Therefore, the patient has a far better chance of recovery than if delay occurs until her strength is diminished from the marked anaemia from haemorrhage or the copraemia from retained faeces. It is agreed today that every myoma that causes adverse symptoms should be removed. The operations that can be done are supra-vaginal amputations and abdominal or vaginal total extirpation. At Prossnitz statistics show that supra-vaginal hysterectomy was done in the vast majority, and with far better results than from total extirpation. Myomata

of the cervix were always operated on. Abdominal total extirpation is indicated when the myoma is undergoing malignant degeneration, in cervical myomata, when adhesions to the neighboring organs render it impossible to remove the tumor without tearing them, and when complicated with purulent collections in the adnexa. In pregnancy, operation is called for when the tumor is growing rapidly, and there are pressure symptoms; when the tumor is likely to cause a premature delivery; when there is danger of peritonitis, in cervical myomata and in polypoid myomata.—Australasian Medical Gazette.

Wassermann Reaction in the Blood of the Umbilical Cord, the Maternal Blood and the Blood of the Foetus after Birth.—Ferro and Gentili (Ann. di Ostet. e Gin.) base their estimate of the value of the Wassermann reaction in the fœtus and mother immediately after birth on their tests made in pregnant women during the last two years. It is interesting to compare the results of this test in pregnancy, labor and the puerperium in women who have certainly had syphilis, who are suspected of it, in normal women and in other complications of pregnancy The syphilitic women may be divided into those who have and those who have not been treated for the disease. The number of syphilitic women was 23 out of 110 tested; the Wassermann was positive in 17, either in the blood of the mother or of the umbilical cord. It was positive in all the mothers who were in the florid stage of syphilis and diminishes in positiveness according as the manifestations of active secondary syphilis were long ago shown. Mercurial treatment has the same action in pregnant women as in other women. This reaction is also positive in eclampsia and malaria in the pregnant woman. It is always absent in normal pregnancy and that accompanied by complicating disease except eclampsia and malaria. It is found that the Wassermann reaction is positive in syphilitic fœtuses 50 to 120 days before specific manifestations appear; the reaction is at first partial only; this reaction may be absent if treatment has been energetically undertaken; in the macerated fœtus the placenta shows flattening of the villi and lessened intervillous spaces. There are vascular lesions, but no formative processes are shown in the epithelium covering the villi. The membranes are not changed; the organisms are found in the fœtal portion of the placenta. Macerated fœtuses may be found in women who have absolutely no evidence of syphilis; the reaction is positive in the cerebro-spinal fluid of fœtuses born of syphilitic mothers, and also in that of fœtuses which have died of syphilis soon after birth. It is present in the cerebro-spinal fluid of those born heredosyphilitic in mothers who do not give the reabtion in their blood or that of the umbilical vein. This reaction in the macerated fœtus alone is sufficient to cause a diagnosis of syphilis; it is negative when death and maceration arise from other cause; but this negative evidence is not sufficient to entirely exclude syphilis.

Virginal Metrorrhagias.—Dalche (Rev. de gyn. d'obst. et de ped.) gives a study of the causes of metrorrhagia and menorrhagia in young girls. In many of these cases there is no pain at all, yet considerable hemorrhage that is abnormal either in quantity or in time of occurrence. There seems to be no anatomical basis to be found in the uterus or pelvic organs, outside of the ovary itself. He says that here, there is a result of ovarian ataxia: a phase of insufficiency succeeds one of hyperfunction, and vice versa. Some of these cases seem to be due to a too rapid and sudden growth of the body and maturation of the ovary. In other cases there is a true hereditary influence, the mother having undergone similar troubles. This condition may be a symptom of a family degeneration: it may result from a latent tuberculous condition, from hereditary syphilis, or from a disturbance of the glands of internal secretion. There may be a hypothyroidism disturbance of the functions of the hypophysis, or of the suprarenals. When metrorrhagia is accompanied by dysmenorrhea there may be hyperemia of the ovaries, or a true menstrual ovaritis even going on to ovarian apoplexy or hematocele. Here there is severe pain in the ovary at the menstrual period and in defecation or urination. A menorrhagic form of chlorosis and a true chlorosis are found in young girls. Metrorrhagia not due to genital disease may be found in the subject of neuroarthrotism, struma, chronic constipation, mitral stenosis and hemophilia. The condition may also be found in connection with true metritis displacements, and adenoma of the mucous membrane of the uterus. As to the treatment of these various forms of hemorrhage, each case must be studied by itself and treated according to the causation found. In many cases, ovarian, thyroid or mammary extract may be of great value. For the immediate attacks complete rest in bed, hot douches, ergot and the usual measures must be used.

Thyroid Preparations for Sterility.—Weil (Munchener medizinische Wochenschrift) says that astonishing results of hormone physiology, pathology and thera-

py, and selects for special consideration the apparent correlation between the thyroid and ovary, which comprises not merely one but a series of possibilities, some antagonistic, some complemental or synergistic. During menstruation and pregnancy the thyroid swells, while in castrates the latter organ may be seen to be atrophic. It occurred to the author to test thyroid preparations in primary sterility assumed to be due to ovarian insufficiency. A barren woman with simple goiter received thyroid preparations on general principles and in the course of two or three months became pregnant. The author then exhibited the remedy to two other barren women who aside from a slight enlargement of the thyroid showed nothing to suggest a reason for failure to conceive. After several months, conception took place in both women. Of four pregnancies while taking thyroid two ended in abortion while one conception is recent and the only case which went to term required forceps. Whether these results are coincidences or indicate a general insufficiency for child-bearing is not argued. There appears to be no doubt that the thyroid hormone artificially supplied determined a physiological congestion of the ovary which promoted conception. None of these women appeared to have had any trouble in connection with ovulation and menstruation, so that a rationale for conception is not accepted.

Rupture of a Hemorrhagic Corpus Luteum Into an Intraligamentary Cyst, Resembling Ruptured Ectopic Pregnancy.—Luker, in The London Lancet, reports the case of a married woman, aged 27, who had one child eight years ago; no miscarriages. She was quite well till August 5th, when she first felt pains in the lower abdomen, which persisted on and off till the 16th, on this date she had an acute attack of pain in the abdomen which made her vomit. The menstrual period which should have started on this date, did not appear. On the 21st there was a second attack of acute pain which made the patient vomit, and on this day she started losing blood per vaginam. She was brought to the hospital and admitted at 2 p. m. Catamenia: Always quite regular; never went over her time before. Last normal period July 13-18th. Period expected August 16th did not appear until August 21st. Previous History: No previous illness. No previous attacks of a similar nature. Condition on admission, 2 p. m.: The patient was in acute pain; pulse 88; temperature 100.5° F. Abdomen: No marked distention or general tenderness. Rising out of the pelvis on the right side to the height of four finger's breadth above the pelvis was a very tender swelling. Per vaginam brownish blood-stained discharge. Cervix softened. Body of the uterus was somewhat pushed over to the left. Behind and to the right of the uterus was felt a very tender swelling continuous with the swelling felt per abdomen and extending some way down behind the uterus. The patient's pulse had gradually increased from 88 to 116. She had vomited once since admission and the pain was getting worse; it was therefore decided to perform laparotomy immediately, and the tentative diagnosis of ruptured tubal gestation was made. On opening the abdomen an intraligamentary cystic tumor was seen closely adherent to the right side of the uterus, together with a right hydrosalpinx; the whole tumor was of about the size of a large fist and was causing some rotation from left to right of the uterus, which was pushed over somewhat to the left side. The tumor was removed and during its removal two cystic cavities, forming the greater part of the tumor, were unavoidably ruptured. One was very thin-walled and contained about half a pint of colorless fluid; the other which was thin-walled in one place, contained several ounces of dark red hemorrhagic fluid. The left tube and ovary were healthy. The patient made an uneventful recovery; menstruation re-appeared on September 27th. The specimen was examined. The right ovary was found to contain a large hemorrhagic corpus luteum which had ruptured into the cyst and was the source of the hemorrhage. The interesting points of the case were: (1) the resemblance of symptoms and signs to those of ectopic pregnancy; (2) the source of the hemorrhage.

Histological Changes in the Uterus Following the Use of Oxytoxic Substances.—La Torre (Gyn. Rund.) presents the results of his observations on 100 dogs in which he employed the following substances: dialysed ergoton, hydrastinin, stypticin, viburnum, metranodin and gelatine. The main point in his experiments was to determine whether these substances produced any anatomic effect in the uterus, based on careful examination of microscopical substances. The ergotin was found to affect all the muscular elements and produced contraction or retraction in a centrifugal direction, including the tetanization of the same and dilatation of the uterine cavity and the lumen of the vessels. Stypticin manifested its effects almost exclusively on the muscular elements of the vessels and effected a contraction of the vessels with a more or less complete occlusion of their lumen. These varied effects produced the same therapeutic result, although

the mechanism is different. Moreover, the ergotin interferes with the flow of the blood to the mucous membrane by contracting the vessels which run through the inner muscular layer, whereas the stypticin accomplishes this same result by a more or less complete closure of the larger vessels. It is also interesting to note that ergotin exerts a stronger action on the muscle fibers if these have become changed, either by pregnancy or any other process resulting in hypertrophy while the muscle fiber of the uterus in its quiescent stage are very little effected. The stypticin, on the other hand, manifests its effects only on the vessels, independent of the condition in which the uterus may be. From this it seems to follow that in any hypertrophic condition of the muscular elements of the uterus, ergotin will give good results if the administration is not too prolonged, while stypticin will be followed by good effects where the muscular fibers are normal. Hydrastinin, viburnum and gelatine produce very slight and non-characteristic changes and seem to be of little practical value. Hydrastinin and viburnum do, however, bring about some contraction of the uterine tissues, but gelatine seems to have no effect in this direction. Metranodin, which is a fluid mixture of hydrastis viburnom, dialysed ergot and cannabis indica, is claimed by the writer to unite the effects of ergot, viburnum and hydrastis, and brings about a slight reduction of the muscular mass and especially of the inner layers, so that the blood does not reach the mucous membrane. These anatomical findings are claimed to be supported by clinical observations in dysmenorrhea and metrorrhagia.

The Importance of Pelvic Deposits in the Diagnosis of Abdominal Cancer.—Turner (British Medical Journal) says that in a certain proportion of cases of carcinoma in the upper abdomen portions of the growth find their way into the general peritoneal cavity, and then into the pelvis, where they become implanted and grow, in many cases giving rise to a mass easily palpable per rectum.

The masses are to be felt in the recto-vesical pouch or pouch of Douglas, on the anterior wall of the bowel, within three or four inches of the anus. They may be single or multiple, and are either detected as a defini.e fixed nodule or nodules, or as an infiltration. As a rule they feel about the size of a small hazel-nut, though they may be much larger. In the Doctor's cases the presence of the deposits had not given rise to any symptoms whatever, and they have only been discovered in the course of routine examination. Cases, however, have been recorded in which the growth apparently originated in the rectum. Should this question arise, the matter could readily be cleared up by sigmoidoscopic examination, for with deposits of growth on the pelvic peritoneum, the mucous membrane is not involved.

The author emphasizes that in cases of malignant disease in the upper abdomen, and especially with stomach cancer, while there may be no signs of dissemination to be made on ordinary abdominal examination and no ascites, there may be quite a considerable deposit in the pelvis, easily recognizable on rectal examination and without any symptoms to point to its presence.

Rectal Administration of Salvarsan in Children.—Weill, Morel, and Mouriquand (Lyon medical) state that in view of the difficulties attending the intravenous administration of salvarsan in children, especially in cases of chorea, they have been trying out the rectal method. While most of those who have administered salvarsan by rectum to adults have given this procedure up because of weakness or slowness in the effects, cases of hereditary syphilis, prolonged, severe chorea, anemia, or afebrile infections in children do not require treatment as energetic as syphilitic adults. Moreover, intravenous medication would appear to be relatively less safe in children than in adults. In three cases recently treated by the authors—one of congenital syphilis and two of chorea, in children from ten to thirteen years of age—successive doses of 0.10, 0.20, and 0.40 gramme of salvarsan were given by rectum. The drug was prepared as though for intravenous injection, mixed with about 100 c.c. of 0.5 per cent. salt solution and 5 or 10 drops of laudanum, and slowly administered through a tube, 1.5 metre long, introduced as deeply as possible into the rectum, Care was taken to have the fluid retained at least four hours. In each case treated pronounced improvement was noted. The writers conclude that, barring emergency cases, rectal administration is the method of choice for giving salvarsan to children, since along with sufficient activity of the drug there is an entire absence of unpleasant reactions, local or general.

The Wassermann Reaction in Heredo-Syphilis.—Leroux and Labbe (Arch. de Med. des Enfants) reports the results of their researches in the sero-diagnosis of heredo-syphilis and family syphilis carried on at the Fortade Heine Dispensary, Paris: The tests were made in Levaditi's laboratory at the Institute Pasteur, by the method of Hecht, controlled by Wassermann's technique. They consider the Wassermann

reaction a useful method in the diagnosis of syphilis provided it is performed in the same laboratory and according to the same technique. Under these conditions, when repeated several times on the same individual it is constant in 77 per cent. of cases. A positive reaction, with known exceptions, almost certainly implies syphilis; a negative reaction does not exclude it. The results of serum-diagnosis require to be interpreted, and must always be subservient to clinical evidence. Serum diagnosis is useful in the study of heredo-syphilis, but to be of value should be completed by systematic research of family syphilis, by the same method; otherwise many cases of latent infantile hereditary syphilis or parasyphilis will escape notice, as well as many cases of latent or unknown family syphilis. The authors obtained a positive reaction in nearly all cases of early heredo-syphilis with active symptoms; in 85 per cent. of cases of late heredo-syphilis but in only 11 per cent. of latent cases. Healthy children issued from syphilitic families all gave a negative result. In heredo-para-syphilis (dystrophics and degeneratives) the reaction was always negative, In the mothers of syphilitic children the reaction was positive in 71 per cent. whether they had symptoms of syphilis or not. The fathers of the syphilitic children gave a positive reaction in 42 per cent. The authors conclude (1) that maternal syphilis is more often latent without manifestations, and more often virulent because unrecognized and untreated; (2) that maternal syphilis is more often conceptional than acquired directly from the father; (3) that the frequency of conceptional syphilis explains Colle's law—a syphilitic child procreated by a syphilitic father never infects the mother, because she is already infected; (4) that the number of cases of purely paternal transmission is small, because in the great majority of cases the mother is also infected; (5) that active maternal syphilis with positive reaction generally gives rise to virulent infantile spphilis, sometimes to latent syphilis without symptoms but with positive reaction, more rarely to infantile syphilis with negative reaction occasionally to healthy children; (6) that latent maternal syphilis with negative reaction nearly always gives rise to para-syphilitic manifestations or healthy children, occasionally to syphilitic with positive reaction, with or without manifestations; (7) that paternal syphilis (the mother being apparently healthy and with a negative reaction) only gives rise to parasyphilitic symptoms with negative reaction or to healthy children; (8) that a father with active syphilis and positive reaction wiihout the mother being infected; (9) that treatment has no constant effect on the reaction, and the latter gives no certain therapeutic indication. Serum diagnosis gives no precise information as to cure or immunity.

Isolated Tuberculosis of the Carpal Scaphoid—A Contribution to the Genesis of Tuberculosis of the Carpus.—Deutschlander (Forts a. d. Getide) reports a case where the radiograph permitted the deciphering of the early appearance of a tubercular focus while yet localized in the scaphoid and where iutervention arrested evolution and extension of the lesions.

Tbe observation is interesting from different points of view. The symptoms correspond to those which we find in cases of fracture of the scaphoid alone, pain spontaneous or provoked, localized in this bone, conservation of the functions of the wrist, etc. Radiography alone does not warrant a sure diagnosis, because following an isolated fracture of the scaphoid is a process of bony rarefaction giving a radiographic picture very much resembling that of a tuberculous focus. Only operation can disclose the cause of the rarefaction. The localization of tuberculosis to one bone, to one focus, has rarely been demonstrated. It is probable, however, that this is always the method of onset in tuberculosis, of the wrist for example, but that it is the early discovery of the primitive focus that is rare.

By means of radiographs made at intervals the author was able to follow the extension of the lesion from the beginning. The neighboring parts of the bone close to the scaphoid are decalcified little by little. The operation showed that the primitive focus was bony and not articular, and that propagation extended by way of the ligaments, the evolution is relatively slow, and in the case reported by the author in the six months intervening between initial symptoms and operation the focus had not passed fhe dimensions of a leod shot.

Radiography alone gives the knowledge of the existence or nonexistence of an inflammatory process in cases where the clinical signs point to a lesion of the scaphoid.

By early intervention the march of the disease can often be arrested.

Treatment of Eclampsia.—Smith, in The London Practitioner, discussing this subject from the standpoint of private practice, states that there are two chief indications for treatment, viz., the convulsive phenomena and the toxemic state. In regard to the first, the drugs most employed are bromide, chloral hydrate, morphine and chloroform. In mild cases the first two may suffice, but the author believes it best

not to waste time seeing whether they will act. Of chloroform and morphine, he much prefers the second; he begins with one-half grain, and repeats it in one-quarter grain doses, the total amount in the first twenty-four hours not exceeding two grains. If any manipulations have to be carried out, or if the fits are not controlled by morphine, and recur frequently, chloroform should be given.

As regards the toxemia, it is often found that there is almost complete suppression of urine in these cases, generally accompanied by constipation. If the patient is conscious, one drachm of compound jalap powder may be given. With this should be combined free washing out of the bowel with warm water enemata; Tweedy advises that a pint of water be left in the bowel. In the unconscious patient, Smith disapproves of the commonly used croton oil, preferring the introduction into the stomach, by means of a tube, of some jalap powder or magnesium sulphate; this allows of preliminary stomach washing. In addition, normal saline solution should be given subcutaneously, one pint into each axilla; this may be repeated later. Diaphoresis should be secured by means of hot baths, wet packing, or hot air baths; of these, wet packing is most easily carried out in a private house. The fluid lost through perspiration should be replaced by means of rectal injections.

With the ald of these measures, not only may a patient pass through labor successfully, but the fits may disappear before the onset of labor. Regarding operative procedures, Smith points out that the benefit obtained by emptying the uterus has been somewhat exaggerated, as shown by the fact that even where the convulsions begin in the puerperium the mortality is from eight to twelve per cent. When the patient is in labor the advisability of terminating the latter as soon as possible, e.g., by application of forceps as soon as the cervix is sufficiently dilated, is undoubted. As for cases arising during pregnancy, rapid delivery does not give good results when employed as a last resort. By immediate operation, on the other hand, the mortality would appear, from published accounts, to be reduced, but the difference is slight and would be more than counterbalanced by the risks attendant on operating under adverse circumstances. Of the various operative methods, vaginal Cæsarean section seems to have given the best results. Induction of labor with bougies, etc., is of use only in cases where the convulsions have been controlled.

Carbohydrate Cures in Diabetes.— Strauss (Deutsch. med. Woch.) gives a summary of the treatment of diabetes by different dietetic measures, especially those dependent upon periods of limitation of the diet to certain specific substances. With reference to "milk cures," he states they are of definite value in certain cases of diabetes, but tolerance of the milk must be determined for the individual case. The various carbohydrate cures owe their beneficial effect to the absence of animal protein and their low caloric value, and hence they are practically starvation cures. Another factor is that the starch is very slowly absorbed, and this slowness in assimilation prevents a marked increase in the glycosuria. It has been established that when carbohydrates are given in small amounts distributed throughout the day that they do not produce as marked glycosuria as when taken in large quantities. Consequently an essential feature of the carbohydrate cures is to give the carbohydrate in small repeated amounts. Experience with the oatmeal cure has been fuller than wtth other carbohydrate cures, but Strauss does not believe that it is superior. Lately a number of observers have reported equally good results with the wneat meal treatment of diabetes. The "potato cure" sometimes will be successful when other methods fail. Strauss adds that it is most important not to give a mixture of different starches, but to adhere definitely to a single form of carbohydrate, for better results are obtained when the carbohydrate is given in a pure form than when combined. The carbohydrate days cannot be kept up for long periods, for they furnish less than the required amount of protein. Attempts to make up the required protein by the substitution of various vegetable proteins for animal protein thus far have not been successful. Strauss has had excellent results by the interposition of a fluid day in the treatment of severe diabetes. The patient is allowed on this day nothing but tea, coffee, bouillon, mineral waters, wine or brandy, and sometimes oranges. The writee says that his experiments and clinical observations indicate than inulin is better tolerated in diabetes than any other form of starch. The addition of inulin to the diet does not increase the glycosuria. The writer says that comparatively small amounts were recovered from the feces after its administration, and therefore he believes that it is largely assimilated. Strauss suggests the use of inulin, especiallp in severe cases of diabetes with acidosis by the method of a course of several "inulin days." As inulin itself is very expensive and difficult to obtain, vegetables rich in inulin should be ordered, such as artichokes. salsify. dahlia tubers, etc.

Isolation in Psychoneuroses.—Pachantoni (Revue medicale de la Suisse romande) says that complete isolation, while a very valuable therapeutic measure in these conditions, is frequently both a hardship to the patient himself and a source of opposition on the part of his family. In some cases, indeed, absolute isolation may prove useless or even harmful. For these reasons the author advocates only partial isolation in psychoneuroses, adopting a plan similar to that of Dejerine at the Salpetriere, Paris. Three or four patients are placed together in a spacious, well ventilated room. They must remain in bed, and are isolated from the exterior in that they are not allowed to receive letters or visitors; but they are able to see one another and to converse.

The results thus obtained were most satisfactory. The plan was resorted to whenever absolute isolation failed to overcome the patient's delirious state. Patients with hypochondriac ideas of long standing were also often placed together, and the results appeared sometimes better than those obtained by individual isolation. Each patient is able to observe, at a period when he is certain of the reality and seriousness of his own affliction, that those of his neighbors are but products of the imagination. By indirect persuasion he is thus assisted in getting rid of his own chimeric and baseless fears. Capricious selfish patients, for years a scourge in their families, in partial isolation undergo a period of training in moderation, altruism, and sociability. On the whole, this form of isolation, employed with due circumspection, is often a useful measure. Where a mutual psychic influence is exerted among the several members of a group af patients, it is always oriented favorably, i.e., the less seriously affected patient influences the more seriously affected in a manner tending to promote recovery.

Problems of Tuberculosis.—Delepine, in the British Medical Journal, says that an attempt which has been made of late years to apply very accurate mathematical methods to the interpretation of data of doubtful value has disturbed scientific opinion to such an extent that facts capable of clear experimental proof are now doubted. Heredity, which had ceased to be considered as having more than a secondary share in the spread of tuberculosis, is once more brought forward as a factor of first importance. The very wide distribution of the Bacillus tuberculosis, and the fact that the great majority of people have at one time or another been harboring the tubercle bacillus and yet have recovered, as well as the analysis of returns of very unequal values, have led some statisticians, Karl Pearson, for instance, to doubt whether tuberculosis should be considered as an infectious disease in the ordinary sense. Such views, if correct, would strike at the root of all modern methods of prevention of tuberculosis. The importance of predisposing factors is often so great that not a few clinicians and administrators have given but scant attention to the essential cause. It must be acknowledged that in many cases it is possible to obtain excellent results by dealing thoroughly with predisposing causes, and often there is no other course open. It is, however, never safe to disregard, even temporarily or partially, the causa causans, because it is liable to variations and may, under the influence of circumstances, acquire infective powers exceeding the average. Neither is it safe to trust entirely to the action of natural or artificial curative agents. Recoveries from infectious diseases may be apparent or real, and do not invariably result in so great a reduction in the number of infective centers as might be expected. Recoveries brought about by natural processes introduce an additional element of complexity in one's estimates of the incidence of various infectious diseases. In studying the conditions which influence the prevalence of any infectious disease one must, therefore, take account of the possible action of a great number of factors, which may roughly be grouped into the following categories: (1) distribution and habits of the infecting parasite; (2) conditions influencing the quantity of the parasite; (3) conditions influencing the virulence of the parasite; (4) opportunities and channels of infection; (5) conditions influencing the resistance of the possible host; and (6) proportion and completeness of recoveries.

Tuberculin Treatment of Tuberculosis.—Bardswell, in The London Lancet, says that the dosage of tuberculin given to the patients in King Edward VII Sanatorium in 1907 was never outside the limits of 1-1000 to 1-600 milligram, T.R. being the preparation used in every instance. Thirty cases in all were treated, over periods varying from a minimum of six weeks to a maximum of twenty-five weeks. Thirteen of these cases had less than six inoculations. The remaining seventeen cases were patients with well-marked lung disease. Classified according to the Turban-Gerhart method, twelve would be described as Group II and five as Group III cases. No case of early and limited disease (Group I) was included. The cases then were for the most part of an unfavorable type clinically. (1) Immediate result—In the case of all the patients thus treated the injection of the

small dose of tuberculin nearly invariably resulted in a satisfactory immunizing response, as shown by the rise in the opsonic index. The repeated immunizing responses were not, however, associated with any appreciable alteration in the clinical condition, in respect to such essential factors as reduction of temperature, diminution in the amount of sputum, disappearance of tubercle bacilli, etc. The author was unable to detect any difference whatever in the progress of the tuberculin-treated patients as compared with the progress of similar types of patients who, living under precisely similar condttions, were not having tuberculin. In no case did the weekly repetition of the small doses of tuberculin give rise to any hypersensitiveness. (2) Ultimate results.—Considering only the seventeen cases whose treatment extended over periods ranging from a minimum of seven weeks to a maximum of twenty-five weeks, the results are as follows: Of twelve cases of moderately advanced disease (Group II), after a period of five years since discharge from the sanatorium, four, or 33 per cent., are well, and the remainder are dead. Of those who have died, two lived for over four years, three lived for over three years, two lived for over one year, and one lived three months only after discharge. Two of the four patients who are well lost their bacilli before they left the sanatorium. The five cases of very advanced disease all died within twelve months of their discharge. These results compare somewhat unfavorably with the ultimate results of comparable cases treated in the sanatorim during the same period without tuberculin. The numbers treated with tuberculin, however, are small, so no great importance can be attached to such a statistical comparison. The conclusion that the author seems justified in arriving at is that the tuberclin from a clinical point of view was a negligible factor, and in no wise influenced either the immediate or the ultimate prospects of the patients to whom it was given.

Digitalis and the Influence of Ions.—Clark (Proc. Royal Soc. Med.) has studied the action of the digitalis glucosides upon the isolated frog's heart, in order to ascertain to what extent this action is modified when the composition of the perfusion fluid is altered. His conclusions are as follows: (1) The action of digitoxin depends entirely upon the concentration of the drug, except when very small quantities of fluid are used. (2) Digitoxin and strophanthin have no diastolic action upon a frog's heart perfused in the manner described by the author. (3) When digitoxin and strophanthin act on the frog's heart only minute quantities are absorbed, but the quantity is not so minute as to exclude the possibility of chemical combination between the drug and the heart muscle. (4) The systolic action of digitoxin upon the frog's heart is dependent upon the presence of calcium. (5) Diminution in the quantity of calcium in the Ringer's fluid diminishes the systolic action of digitoxin. (6) The presence of excess of alkali or the absence of potassium slightly increases the systolic action of digitoxin. (7) The presence of excess of calcium, or of blood serum, does not influence the systolic action of digitoxin.

Chronic Intestinal Stasis.—Lane, in The London Lancet, says the term "chronic intestinal stasis" indicates such an abnormal delay in the passage of the intestinal contents through a portion or portions of the gastrointestinal tract as results in the absorption into the circulation of a greater quantity of toxic or poisonous materials than can be treated effectually by the organs whose function it is to convert them into products as inoccuous as possible to the tissues of the body. When these poisons and their products of conversion exist in excess in the circulation they produce degenerative changes in every tissue and in every organ in the body. It is probable that the textures of those organs whose business it is to convert, carry, and eliminate them suffer more than do the other tissues of the body which are merely permeated by them. In proportion as the stasis is prolonged, so under the influence of a progressive strain greater than they are able to bear these several organs undergo a degeneration which proceeds with increasing rapidity as the condition advances. The liver is the most important converter of the poisons, and the kidneys and skin are the chief excretors of the products of conversion. Unless the capacity of the several tissues of the body to resist the entry of certain organisms is inhibited by the autointoxication resulting from intestinal stasis it is impossible for these diseases to develop. The author refers more particularly to tuberculosis, rheumatoid arthritis, and similar diseases. Therefore, to meet these diseases he adopt means to improve the drainage scheme, whether simply mechanical or operative, with the most excellent results. This is nowhere better exemplified than in the extraordinarily rapid disappearance of large tuberculous glandular masses in the abdomen after disconnection of the big bowel. Pigmentation of the skin is a very marked feature in advanced cases of stasis, especially in patients with dark hair. Following almost immediately upon exclusion of the large bowel, the cold, blue, clammy

hand is replaced by a warm, pinkish, dry one. Cancer of the breast, of the ducts of the liver, or of the pancreas is, according to the author, the result of chronic intestinal stasis.

Skin Sterilization by Mercuric Chloride.—Clarke (British Medical Journal) says mercuric chloride in methylated spirit is a more powerful antiseptic than tincture of iodine, and has practically none of its disadvantages. It can be painted all over the penis, scrotum, anus, etc., and causes only a slight burning sensation when first applied. It can be freely used, no local inflammation resulting so long as the spirit is allowed to evaporate. A small superficial burn, however, is caused by the spirit solution if a swab or towel soaked with it is left in contact with the patient's skin during the operation. This can easily be avoided. The solution does not stain clothing or towels and no irritating vapor is given off as it dries on the skin. As an antiseptic mercuric chloride solution is very efficient, and no preparatory dressing of the skin is required before the operation.

Treatment of Acute Suppurative Otitis Media.—Woods (British Medical Journal) emphasizes the importance of preventive measures. In mild cases of acute otitis media keep the patient in an even temperature, administer a purge, and apply moist heat locally. If thought necessary, warm drops (glycerin and water equal parts) may be instilled in the ear. If the tympanic membrane is bulging, myringotomy should at once be performed, and if there is any indication of spread of infection the mastoid antrum should be opened. In cases where suppuration has occurred and the discharge is coming through a perforation in the tympanum the indication is to remove the discharge from the meatus by syringing with sterile water, or better, slightly alkaline lotion, three or four times daily. After careful syringing the ear should be dried. Then—twice daily—after syringing and drying, the meatus should be filled with some antiseptic either in the form of a lotion, or a powder, such as boric acid. The author uses "boralcohol," which is a saturated solution of boric acid in 40 to 45 per cent. alcohol. Claude Rundle has found that horse serum—preferably diphtheria antitoxin serum—has a distinct value in otitis media complicating the acute stages of the infective fevers. Gustav Alexander advocated early paracentesis when conservative measures (such as instillations of carbolic glycerin, or a warm solution of aluminium acetate, or cocaine, novocaine, or alypine instillations) failed to give relief. The internal administration of hexamethylene tetramine (formamine) was of undoubted value and it was essential that large doses should be given. Children required half a gramme twice daily, adults four to six times daily. If the purulent discharge became serous the drug might be stopped. He also recommended the drug for prophylactic use (against post-operative meningitis) and in cases of meningitis of otitic origin.

Potassium Permanganate in Snake-Bite.—Bannerman (Indian Med. Gazette) gives a resume of a series of experiments undertaken to investigate the value of potassium permanganate as a remedy for snake-bite. The following conclusions are arrived at: "The conclusions as to the action of potassium permanganate powder on small doses of cobra venom injected just under the skin appear to be that this treatment is of some little use under these highly artificial conditions. It must be remembered, however, that a snake does not deposit its venom under the skin, but striking as it does with its fangs at right angles to the skin, the poison must usually be placed well below the fascia of the part, and therefore further removed from the applications of a chemical antidote." "With regard to daboia venom injected just under the skin, the results are very similar to those obtained with the venom of the cobra, i.e., that under such artificial conditions the treatment by free incision and rubbing with powder of potassium permanganate is of some little use. As a practical measure for employment after actual snake-bite it appears to be of no use whatever."

Uraemia Treated by Morphine.—Carter (British Med. Jour.) The case was that of a man, aged 56, who developed uræmic symptoms which failed to respond to diaphoretics, aperients, and warm packs. Venesection was tried, but was not a success. The patient was given a hypodermic injection of morphine sulphate ($\frac{1}{4}$ grain) and atropine sulphate ($\frac{1}{150}$ grain) and oxygen inhalations were ordered. On the following day the hypodermic of morphine and atropine was repeated, and venesection was successfully performed, 25 oz. of blood being withdrawn. This relieved his distressing symptoms, and he made a good recovery. In the opinion of the author the morphine saved the patient's life.

The Vanadium Chemical Company of Pittsburgh, Pa., announce that Dr. Francis M. Turner has resigned from the General Managership of the Company, effective February 1st, 1913.

Miscellaneous.

Cactus Grandiflorus.

Thirty thousand physicians, graduates of all schools, were recently asked their opinions as to the vegetable remedies of greatest value in their practice. Of the 10,000 responses Cactus Grandiflorus received 6,239 votes (Journ. Am. Pharm. Assoc.). It was mentioned oftener than any other drug, offiinal or non-officinal. This reminds us of Cactina Pillets, which were introduced to the pharmaceutical and medical professions in 1889 by Mr. Sultan, of the Sultan Drug Company. This is the original definite product of cactus, presenting the drug in a constant and reliable form; and the thousands of physicians who have used it in their practice for the past twenty-four years have attested to its undoubted value as a cardiac remedy of great usefulness in the treatment of functional heart troubles. As the makers of Cactina Pillets have consistently advertised this product in the legitimate medical press, it would seem that their great faith in the drug is now justified in an ample manner.

Urethral Folliculitis.

Luys states that the inflammation of the glands of Littre in the course of a gonorrhea, if more or less pronounced, is called a folliculitis. This complication is very common and the abuse of injections appears to be the most frequent cause. The treatment consists in slow and methodical dilatation of the penile urethra, followed by direct endoscopic treatment. This is superior to external surgical excision. Inspection of the urethral mucosa reveals the site of the lesions which may be evacuated similarly to ordinary furuncles by incision and pressure. This method obviates the production of a urinary fistula, and the cure is complete and permanent.—La Clinique.

A New Work on the History of Medicine.

W. B. Saunders Company, publishers, of Philadelphia and London, have in active preparation a work on the History of Medicine by Dr. Fielding H. Garrison, Principal Assistant Librarian, Surgeon-General's Office, and Editor of the Index Medicus. Dr. Garrison's twenty years' experience in medical bibliography, and the unusual advantages derived from his close touch with the rich stores of the Surgeon General's Office, fit him most admirably for such a work as this.

His book will present the history of medicine from the earliest ancient and primitive times; on through Egyptian Medicine, Sumerian and Oriental Medicine, Greek Medicine, The Byzantine Period; the Mohammedan and Jewish Periods, the Mediæval Period, the Period of the Renaissance, the Revival of Learning and the Reformation; the Seventeenth Century (The Age of Individual Scientific Endeavor), The Eighteenth Century (The Age of Theories and Systems), the Nineteenth Century (The Beginning of Organized Advancement of Science), the Twentieth Century (The Beginning of Organized Preventive Medicine). There will also be appendices covering Medical Chronology, Histories of Important Diseases, Histories of Drugs and Therapeutic Procedures, Histories of Important Surgical Operations, and Bibliographic Notes for Collateral Reading.

Dr. Garrison's work will undoubtedly be a valuable book to every medical man. In this one volume he will get a complete history of medicine from its earliest times, presented in a concise form.

The illustrations are intended to stimulate the reader's interest in the picturesque aspects of medicine and in the personalities of its great leaders. The biographies will be confined to the most important facts and to interesting personal traits. The original bibliographic references to the important discoveries, operations and experiments will be given. Each period is to be followed by a brief survey of its social and cultural phases. Altogether it promises to be a most important addition to medical literature. We await its publication with much interest.

"Elixir Saloform Comp., Flexner." Contains 20 per cent. alcohol. An efficient remedy for rheumatism, gout, cystitis and uric acid solvent. Prepared for physicians' prescriptions only. Robinson-Pettet Co., incorporated. (See page xiv this issue.)

QUOTATION AND GOSSIP

From and About New and Notable Books and their Authors.

By a Book-lover of New York City.

"KISMET!"

"Dying, but not dead! The Turk is a twentieth century anachronism. His life is in the past. By the waters of the Golden Horn he sits dreaming away the years, heedless of the world-stir about him; and in his dreams he lives for Semitic Islam over again the days of Good Haroun of Bagdad; while from minaret at evening fall goes out upon the still air as of old the muezzin's cry, *Allah il Allah!* And the future? 'Kismet!' and he turns again to his dreams.

"Kismet! for he knows the land is not his; and he feels the hour of doom. Islam has never existed only as an armed camp upon

European soil. Its tenure has been that of the sojourner; not the abider. It was so with the Moor in Spain. It is so with the Turk by the Bosporus. The Turk recognized this uncertain tenure from the beginning, and moved in, rather than built. The churches of Constantine became the mosques of Mohammed, with only the Christian symbols plastered over; and now, after three centuries, the stucco is peeling off, and the Greek inscriptions stand revealed, mutely prophesying of the end."

So reads a bit of prophecy and historic philosophy by Dr. Joseph P. Widney, in his great work on "Race Life of the Aryan Peoples," written and published by Funk & Wagnalls Company before the recent war of the Allies against Turkey began.

IN THE DAYS OF THE MAKING OF KINGS.

They were strange days, as we read of them now. A new volume from the press of Funk & Wagnalls Company, New York, throws on them new gleams of revelation, as from a 20th Century searchlight. It is a new translation and condensation of Guizot's History of France, and many chapters of it read like a romance.

What a singular admixture of pride and piety, of wisdom and wickedness, can be seen in those men and women who sat upon thrones and knelt before them! Louis XIV, for instance, was himself a whole panorama—as one realizes who visits, even now, the palace at Versailles. Mazarin, who had seen his birth, and who knew him to the core, said of him:—"He has in him the making of four kings and one honest man."

Fouquet, who feted him so magnificently at Vaux, was early in disgrace, and when sent to prison for life Fouquet's pious mother could say of her son, about whose soul she had been supremely anxious when the king honored him—"I thank Thee, O God; I have always prayed for his salvation, and here is the way to it."

What a lusty old fighter Louis XIV came to be! "I loved war too much," was his pathetic confession on his death-bed. But he made a gallant figure, even late in his long life, as one of the illustrations in this plethoric volume is proof. And he is but one of the many personages described and pictured in these more than 600 pages, admirably translated by Gustave Masson. The entire history is panoramic.

THE RIGHT TO BE WELL BORN.

In the drama called "The Lion's Whelp," there is a dialog between an old man and a youth. Says the old man—"The next century will be the century of the child, just as this century has been the woman's century. When the child gets his rights, morality will be perfected."

This remark, and what follows, may be found in quotation as the end of an unusual book entitled "Right of the Child to be Well Born," just issued by Funk & Wagnalls Company, New York. The book sufficiently answers one question asked on one of its later pages—"If God joins man and woman together in wedlock, what has eugenics to say about their fitness to be parents?" And eugenics has much to say, that is well said by Prof. George E. Dawson, Ph.D., the author. He has been long a teacher of youth; here he wisely instructs parenthood.

"Suffer, little children," as thus punctuated, is the new commercial version of the old command of Christ. And while the children suffer in canneries and mills, everywhere and anyhow, every right of theirs ought to have widespread recognition, and be advocated by every man and woman.

POLITICAL TANGLE TALES.

Now that stage setting has actually begun for the Campaign of 1916, by the Progressive renomination of Theodore Roosevelt, added interest attaches to the question —"What will be Col. Bryan's attitude these next three years and more?" Whether he enters the Wilson Cabinet, or holds himself as a free lance outside, Col. Bryan seems destined to remain a picturesque figure in the political arena; and this fact lends permanent value to A Tale of Two Conventions, the book lately published from his pen by Funk & Wagnalls Company. It is a revelation of Bryan, and of others, at Chicago and Baltimore, as men and things came strongly into focus during those days of party heat long to be remembered.

WHAT ARE THEY WORTH?

"Boys and girls, what are you worth to your parents?" is one of the questions found in the wonderfully interesting new book entitled "Chats with Children of the Church." "Four thousand dollars for a boy," merely represents the author's estimate of cost, not the boy's real value. Take them by and large, the worth of children is great enough to justify just such an effort for their mental and moral beneficence as this attractive volume embodies. It is not a work on economics. It brims over with story, and bloom, and simile, and bits of sermon, and the charm of a most uncommon gift for entertaining and inspiring children.

COULD YOU HAVE MADE A BETTER WORLD?

"Some men think that they must indict the world for cruelty, as did John Stuart

Mill. They believe they could have built a better world."

So comments Dr. Newell Dwight Hillis, in his little brochure on "The Misfortune of a World Without Pain," just published in dainty green leather dress by Funk & Wagnalls Company. Dr. Hillis looks under the pain to its perfection of result.

"Take pain and sorrow out of life," he says, "and the mother's sympathy and sacrifice, the hero's struggle, and the sage's martyrdom would go, and the brightest stars be extinguisned in life's sky." And he further says:

"In the laboratory, in Germany, last summer, a scientist showed me the new foods—these were the substitutes for the slow, tardy growths in field and vineyard. What capsules of dry powder! What combinations of chemicals to take the place of meat and bread! What foods in glass jars, and chemicals in tin cans! Tried by all known food tests, these chemicals satisfied fully nature's demands. But looking at the capsules and dry powders and canned portions, I thought of the difference between the way man manufactures foods and how God grows foods. I thought of the Concord grapes and the Catawbas, of the Winesap apple and the Crawford peach, of the strawberry and the pomegranate, of the nectarine and the cantaloupe. Over against the mucilage capsules I put the raspberry and the blackberry, and over against the chemical pellets I put the pear and the plum. It is ugliness against beauty, ashes against ambrosia, gall against nectar, sawdust against strawberry, death against life. How empty these modern substitutes for character! How futile these makeshifts of science in place of eternal realities of God. What bubbles these philosophars are blowing, wherewith to give hungry men who ask for wheaten bread. Even Christ was made perfect through suffering, and the disciple is not above his Master, nor the servant above his Lord."

WHAT OF THE NEXT GENERATION?

"We are not to be excused if we fail to hand over to the next generation a material heritage unwasted; still less are we to be excused if we hand over that heritage to a wasted generation."

So runs a wise utterance of Theodore Roosevelt in his new little book on the "Conservation of Womanhood and Childhood," which forms one of the "Leather-Bound Pocket Series" being issued by Funk & Wagnalls Company, New York. Every utterance after this order is wise, and timely now in view of the recent developments concerning child labor and Sunday labor.

"Priests, ministers and physicians of every mill town in America," says Col. Roosevelt, "where the seven-day work governs, could testify how it undermines the happiness and health of the people."

The Federation of State Medical Boards will hold its annual meeting at the Congress Hotel, Chicago, on Tuesday, February 25th, 1913.

Essayists, eminently qualified, will prepare papers upon the following subjects:

"Is Universal Reciprocity to be Desired?"

"Should Medical Boards Require One or More Years of College Work Preliminary to the Study of Medicine?"

"Should One or More Years in a Hospital be Required for Admission to the Examination for Medical Licensure?"

"Rules and Regulations Governing Examinations for Medical Licensure."

"Qualification of Examiners."

"What Fee Should be Required for the Examination?"

"Benefit of Having a Single Federation of State Medical Boards and Method of State Board Record Keeping."

"Means of Keeping Politics out of State Board Affairs."

These topics are all of practical and vital interest to medical colleges, medical examining boards, the profession at large and the public.

Those contributing the papers on these subjects come with years of experience, and no medical board can afford not to be represented. An earnest and cordial invitation to this meeting is extended to all members of State medical examining and licensing boards, teachers in medical schools, colleges and universities, delegates to the Council on Medical Education of the A. M. A., to the Association of American Medical Colleges, and to all others interested in securing the best results in medical education and legislation.

The officers of the Federation are Arthur B. Brown, M.D,, President, New Orleans; George H. Hutson, M.D., Secretary-Treasurer, Columbus (State House), Ohio; James A. Duncan, M.D,, Chairman Executive Committee, Toledo.

A somewhat startling suggestion is put forward by Dr. Buizard says the Australasian Medical Gazette. Why, he asks, should condemned criminals be executed when society might make a better use of them by making them subjects for medical research? He suggests that the criminal would, rather than submit to capital punishment, prefer to allow himself to be inoculated with disease germs. He would have a chance, however remote, of surviving and

since he has been adjudged guilty of taking human life he would be given a better opportunity of expiating his crime by the probability that owing to the experiments he has been submitted to, hundreds of lives might be saved by the medical knowledge gained. At present medical research is hindered by the fact that doctors have, except in rare cases, only dead bodies and invalids on which to experiment. If they had healthy and vigorous living subjects, the value of the knowledge gained by inoculating them with typhoid, cholera, diphtheria and other germs would be inestimable.—Indian Medical Gazette.

Suprarenal Gland Extract in Cardiac Dyspnea and Cardiac Dropsy.

Voight reminds us, in the British Medical Journal of March 6, 1912, that the practitioner often has to deal with failure of compensation in cardiac cases. Digitalis, strophanthus, convallaria, caffeine—all are useful in their turn; but sometimes one and all may fail us. There is no doubt that strychnine hypodermically is an invaluable remedy in failure of cardiac compensation; that the nitrites are of great service in some cases; that atropine subcutaneously relieves the dyspnea of others; that potassium iodide is not to be despised as a heart tonic; and that the Nauheim bath treatment, judiciously applied and carefully supervised, does wonders in the early stages of compensation failure.

But there is another remedy which can be relied on in some cases. This is suprarenal gland—the solution of the extract of the gland, used hypodermically or by intravenous injection, or the gland substance, given by the mouth in tablet form.

Voight has had under his care several cardiac cases in which dyspnea and dropsy were prominent symptoms, and in which suprarenal gland was administered. He proposes here to give a report from his notes on two of these cases only. In the others the action of the remedy in combating the symptoms was maintained. In all, more or less severe dyspnea was relieved, sometimes by the hypodermic injection of from 5 or 10 to 15 minims of the 1-in-1000 adrenalin solution (Parke, Davis & Co.), at other times by a 5-grain tablet of the suprarenal gland substance administered by the mouth. When the dyspnea was not very severe, the dose of adrenalin solution injected hypodermically was from 5 to 10 minims (1-in-100 solution), and the 5-grain tablet of the gland substance was halved for each dose by the mouth. In general practice one cannot always make provision for the amount of urine passed by the patient in twenty-four hours to be accurately measured. But where he succeeded in making such provision while his patients were under treatment by the tablets of suprarenal gland substance administered by the mouth, he almost invariably found the quantity of urine increased and the dropsy at least temporarily diminished by the treatment. Sometimes the apparent effect of the remedy in this respect was marked and striking.—Indian Medical Gazette.

"Nail the Window Open."

The present popular crusade against tuberculosis is educating the public to the value of fresh air and sunshine.

The comparative immunity to tuberculosis enjoyed by the primitive races, prior to their civilization, shows us that patients must be made to adopt that primitive mode of livink at their own homes, even if we have to nail the window open.

Of greater interest is the fact that some time ago there appeared in the Muenchener Medizinische Wochenschrift an obscure article referring to the work of Bayle of Cannes, France, describing almost marvelous results in the treatment of tuberculosis, by administering a soupy concoctin of raw spleen in 100 gram doses.

Because of the large percentage of permanent results obtained, a resume of which appears later, it was deemed worthy of investigation in the laboratories of Reed & Carnrick.

It was quickly seen that this crude method, used by Bayle, Jolly and various others, had many objectionable features, which hampered its extensive use.

After exhaustive experimental work, it was demonstrated that these vital principles of the spleen could be isolated, and resulted in the perfection of a distinct therapeutic entity, eliminating all the objections of Bayle's method, and combining the action of these vital principles of the spleen with the already well known reconstructive action of Protonuelein.

This combination of two of the most powerful antagonists of the tubercle bacilli, has been given to the medical professiou for their use in the treatment of all cases of tuberculosis.

This product is known as Protonuclein Beta and the favorable reports already show that it should be used thoroughly in every case where the tubercle bacilli have found lodgings.

In the following pages will be found a brief resume of the work and report of cases, together with an outline of treatment, diet, etc., that should be used.

Bayle's method was to take the raw spleen, chop fine and make into a soupy

condition, giving 100 grams of this in divided doses daily.

By this crude manner of administering the vital principle of the spleen, he treated 150 cases of tuberculosis of the lung, two of osteo arthritis, 10 of scrofula, and one of tumor albus, and found that 75% of the cases of phthisis recovered perfectly, a few being in very advanced stages. The localized tubercular cases were all healed, the time varying from two months in some of the scrofular cases to eight months in the severer bone cases.

Jolly treated 90 cases of tuberculosis with the same raw spleen soup, and in only six cases was the treatment without effect. At the same time he was astonished with the quick results, cases of localized tuberculosis being healed 10 times quicker than those treated by the old classic method.

Canaan has made exhaustive use of Protonuclein in various cases of tuberculosis; in 110 reported cases, he has found 21 were cured, 46 improved, 23 remained stationary and 20 died, or nearly 61% showed results by using the reconstructive protonuclein.

An analysis of the protonuclein treatment in some 500 cases showed:

Phthisis, with fever and without cavities, even with numerous bacilli in sputum, responded most quickly. Apyrexia types and tubercular laryngitis, 50 per cent. improved. Bronchial pneumonic type with cavities, 20 per cent. improved. Scrofula and Tuberculosis of bones and joints, 90 per cent. improved. General tuberculosis, distinct reactions, but not permanent.

CLINICAL REPORTS.

That the present widespread crusade against the "Great White Plague" will prove of material benefit in the way of educating the public in regard to the value of fresh air and sunshine, both as preventative and curative agents, no one will question.

Fortunately, patients with tuberculosis are usually prone to be very optimistic and willingly follow the course laid out; a circumstance of the greatest value when we take into consideration the more or less prolonged treatment necessary in even the most favorable cases.

Case 1.—Miss G., age 28, seamstress; mother, one brother and two sisters died of phthisis. Fairly good health, until attacked by la grippe, followed by progressing emaciation, slight fever, night sweats, and cough with considerable muco-purulent expectoration.

Physical examination demonstrated small area of consolidation at apices of both lungs. Microscopical examination of sputum revealed numerous tubercle bacilli.

Treatment.—Patient was carefully instructed concerning the value of fresh air and sunshine, and advised to live in the open. Doors and windows of her sleeping apartment were thrown wide open, the only precaution observed being the employment of abundant bed clothing. Cold sponge bath in the morning, followed by breathing exercises. Protonuclein tablets were given three, two hours before each meal. Patient discharged cured in six months, and eighteen months later still gaining.

Reports of six other cases in persons under forty, all with bad family history and each showing tubercle bacilli in the sputum, have all been discharged cured, after from two to nine months of fresh air, sunshine and protonuclein.—Dr. M. Luther Spriggs in Medical Progress.

A Practical Test for Indican.

The distinct clinical importance of intestinal putrefactive dyspepsia, and the autotoxemia to which it gives rise, is now thoroughly appreciated by every well informed physician. The diagnostic importance of the indican test as an indication of the existence and degree of such auto-intoxication, is equally well recognized. The object of this note is to call the attention of our readers to the convenient and practical test for indican, now being distributed to physicians by the makers of Chologestin and Tablogestin (Tablets of Chologestin). This somewhat unique piece of ethical advertising literature should be not only of interest, but also of practical assistance to every practitioner. It may be had by addressing F. H. Strong Co., 58 Warren St., New York.

Abstinence Delirium of Alcoholics.

Furer refers to the newer doctrines of alcoholism specialists that abstinence delirium is more or less a bugbear and that the use of the drug may commonly be suppressed at once without prejudice, supposing, of course, that the patient is to be under proper treatment. The public and rank and file of practitioners do not agree with the sanatorium men and in theory the contention of the latter seems all wrong. During the past fifteen years the author has treated 500 chronic alcoholics with sudden withdrawal of drink. The patients were naturally of the upper classes, as the poorer individuals cannot avail themselves of private sanatorium treatment. The ages varied from 16 to 64 and 46 were females. The type of alcoholism was that dependent upon a steady impulse to keep constantly intoxicated, either temporarily or the year around. The amount and kind of drink taken varied

Intractable Coughs and Colds

—owing their prolongation to constitutional or systemic weakness —are usually bound to continue until the whole body are substantially improved. The well-known capacity of

GRAY'S GLYCERINE TONIC COMP.

to spur physiologic processes, promote functional activity and restore the nutritional tone of the whole organism, readily accounts for the benefits that promptly follow its use in all affections of the respiratory tract.

¶ When local remedies fail, or at best give but temporary relief, "Gray's" can be relied upon to so reinforce the natural protective and restorative forces of the body that even the most persistent catarrhal diseases are quickly controlled and overcome.

135 Christopher St. THE PURDUE FREDERICK CO. New York

LISTERINE

Listerine is an efficient, non-toxic antiseptic of accurately determined and uniform antiseptic power, prepared in a form convenient for immediate use.

Composed of volatile and non-volatile substances, Listerine is a balsamic antiseptic, refreshing in its application, lasting in its effect.

Listerine is particularly useful in the treatment of abnormal conditions of the mucosa, and admirably suited for a wash, gargle or douche in catarrhal conditions of the nose and throat.

In proper dilution, Listerine may be freely and continuously used without prejudicial effect, either by injection or spray, in all the natural cavities of the body.

Administered internally, Listerine is promptly effective in arresting the excessive fermentation of the contents of the stomach.

In the treatment of summer complaints of infants and children, Listerine is extensively prescribed in doses of 10 drops to a teaspoonful.

In febrile conditions, nothing is comparable to Listerine as a mouth wash; two or three drachms to four ounces of water.

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widely, the record being held by a man who drank daily a liter of 96 per cent. alcohol with added amounts of beer, wine, and the ordinary spirituous drinks which were taken in accordance with the requirements of thirst. The most conspicuous effect was temporary failure of mental power in connection with the demands of business and personal and social exactions. There was a state of over-anxiety or fear, which was expressed incidentally in connection with the abolition of the habit—a fear of disastrous consequences or intense suffering, or both. Moral dereliction was frequently in evidence, as were also alcoholic epilepsy, Korsakoff, and other forms of alienation and of course delirium tremens. Of somatic disturbances there were tremor, neuritis, and gastroenteric disturbances. On the other hand, myocarditis, arteriosclerosis, renal and hepatic diseases, and diabetes were not greatly in evidence. As one-half the men had contracted syphilis at some period the arteriosclerosis, hepatic cirrhosis, and some other lesions could be set down in part to this component. Upon this background the author studied the matter of abstinence delirium. The patients were at once placed on rational treatment in connection with suppression, and but seven cases of delirium tremens appeared—a very small number, but sufficient to prove that abstinence delirium really exists, and under unfavorable conditions might even be of common occurrence, thus bearing out the contention of the old-time practitioner and public.—Deut. med. Woch.

Insanity and Epilepsy in Ancient Times.

Jones notes that insanity was familiar to the Egyptians, whose mentally afflicted were taken to the Egyptian temples, where they were treated by the priests with incantations and sacrifices. Traditional medical knowledge in regard to the insane is said to have been carefully preserved in India. Among the Greeks, Æsclepiades constituted an hereditary order of priesthood, who were supposed to exercise curative powers over insanity; and there were Greek laws made 500 B. C. defining those lunatics who had to be confined. The Romans in their laws guarded the insane as well as their estates. Some of the earliest authentic cases of insanity, as well as of epilepsy, are related at considerable length in Holy Writ; for instance, the insanity of King Nebuchadneezer, and also his recovery, after which it is recorded he was replaced as King upon the throne of Babylon. The history of King Saul, 1000 B.C., also relates his insanity, and there are several descriptions of epilepsy, the most typical being the only child, who was also a lunatic, for he "suddenly crieth out and foameth at the mouth and gnasheth his teeth," and "oftentimes he falleth into the fire and oft into the water." The ancients not infrequently ascribed epilepsy to the malice of demons, or to the anger of offended deities. If a person was seized with epilepsy in the forum, the Romans considered it an ill omen, the meeting was dissolved, and all public business was suspended for that day. Hence the disease was called morbus comitialis. Morbus qui sputatur was another of its names, because those present were accustomed to spit upon the epileptic, or into their bosoms, either to express their abomination and loathing, or to avert the evil omen.—The London Practitioner.

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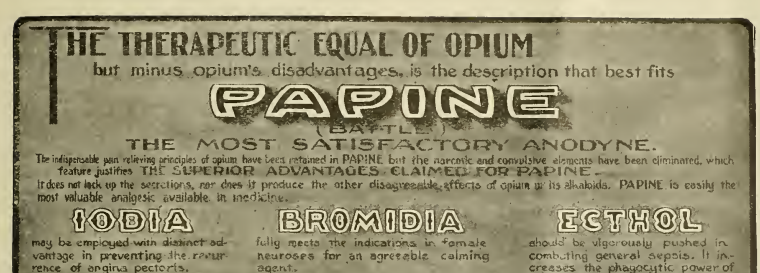
Diet in Nephritis.

The rules for diet in nephritis are stated by A. Kakowski as follows: During the first two days of acute nephritis only weakly alkaline water and boiled milk are allowed in gradually increasing amount (one to two liters daily). After the tenth day cream and butter are added, and after the fifteenth to twentieth day sugar, rice, farina, wheat



bread and weak tea. In sub-acute nephritis non-irritating vegetables and fruits may soon be added to the milk, cream and butter and very soon two or three soft boiled eggs are given. In chronic parenchymatous nephritis the diet should be a mixed one, consisting chiefly of cereals, non-irritating vegetables and fruit, tea, fruit juices, milk, butter, bacon and eggs. Meat should be given very carefully. It is best to begin with recently slaughtered chicken, and if this is well tolerated to add veal, pork and beef. Sausages, cheese, preserved fish, venison, mushrooms, spices, alcohol and seasoned broths should never be allowed. In contracting kidney the diet depends more upon the condition of the circulatory organs than the kidneys. The amount of fluid ingested should not, however, exceed 1,500 Cc., and everything irritating should be excluded. Where there is azotemia, the proteids should be limited, and where there is retention of the chlorides the amount of salt taken must be reduced as much as possible.—Berl. klin. Woch.

Lipoid Metabolism in Developing Chick.

Hanes states that the liver of the embryo during the first two weeks of development contains an abundance of isotropic fatty globules which represent a mixture of lipoids in which phosphorized fats predominate. During the third week of incubation the fatty globules in the liver change their physical and chemical characters. They become anisotropic and exhibit the reactions and properties of esters of cholesterol. The phosphorized fats gradually disappear from the liver during the third week. The phosphoric acid utilized by the embryo chick in calcification is derived from phosphorized fats. It is suggested that the phosphorized fats are split in the liver, the glycerophosphoric acid portion being liberated for calcification, while the free fatty acids are esterfied by cholesterol. A review of chemical analyses of aortic atherosclerosis and calcificarion, and a comparison of the conditions in atherosclerosis with those of the developing chick liver, suggest that pathological calcification results from a splitting in situ of phosphorized fats with the subsequent formation of calcium salts, as suggested by Baldauf.—Journal of Experimental Medicine.

Posthemorrhagic Anemia.

Milne states that in rabbits and cats in which a hemorrhagic anemia has been produced, the hemoglobin is regenerated much more slowly than the red corpuscles, but the index, relative to the red corpuscles, never rises above one. The resistance of the corpuscles is not increased. In erythrocytes developing in the bone marrow, the nucleus of the erythroblasts seems to lose its chromatin, but is apparently not extruded. Punctate basophilia of the erythrocytes is a common feature and seems to result from a diffusion of nuclear chromatin through the cell. Extramedullary myeloid metaplasia is generally slight, but in moderately severe and long continued anemia from bleeding it may be very extensive. Lipemia usually occurs when the blood is reduced below a certain limit. The greater part of the fat in the serum can be extracted with ether and is stained by osmic acid. Extensive fatty infiltration of the organs may occur and also widespread necrosis in the central parts of the liver lobules. Pigmentation of the internal organs is usually only slight, but may be considerable, particularly in spleen. Although there are

minor differences, all the essential features of anemia produced by toxins can be reproduced by hemorrhage.—Journal of Experimental Medicine.

Neosalvarsan Locally in Parenchymatous Keratitis.

It is a well known fact that neosalvarsan, administered in the usual way, has a pronounced effect upon most specific lesions, but that it is often ineffectual in the treatment of parenchymatous keratitis, probably because it is difficult for the drug to reach the lymph-spaces of the cornea. Experimentally, it had been shown that a 2½ per cent. solution of neosalvarsan does not irritate the conjunctiva of rabbits, so there seemed no objection to try the locol application of the drug. In the case observed by L. Rosenmayer energetic mercurial treatment did not prevent the extension of the process to the second eye. The author then applied a few grains of the drug to one eye and instilled a few drops of a 2 per cent. solution into the second eye. The extension of the process was at once checked in both eyes and the cornea soon commenced to clear up. It may be an advantage to apply the neosalvarsan suspended in an oily solution of atropine as decomposition of the drug is prevented in this way.—Muench. med. Woch.

Experience with Luminal.

Luminal has been employed by Kino in 25 patients, using 450 single doses in all. Most of the patients suffered from nervous insomnia, excitation and psychic unrest. The largest single dose given was 0.4 Gm. and the largest daily dose 0.6 Gm. These relatively small doses were generally effective, probably because the patients had not been accustomed to other hypnotics. An effect was generally seen within one hour. Where other hypnotics had not been given previously, sleep lasted seven to eight hours and the following morning there was a slight somnolency which rapidly passed off. Where there was merely a change from another hypnotic to luminal, the sleep lasted only two to four hours, but was refreshing and satisfying and there was less sleepiness the next morning. The drug was given by mouth and was invariably taken without resistance. The urine, pulse, blood-pressure and the gastro-intestinal tract were not influenced in any way. The effect of the drug was particularly pronounced in epilepsy. The bromides could gradually be replaced by luminal, with the result that the attacks became very much less frequent or disappeared altogether. A cumulative effect was not seen and the urine remained free from albumin even where the patient took the drug for a very long time. It was never necessary to increase the dose, and, when the drug was discontinued, the attacks promptly re-appeared. It thus seems as if the drug is of real value in the treatment of epilepsy. Prof. M. Rosenfeld is also well pleased with the results he has obtained with luminal. He uses no more than 0.2 to 0.3 Gm. at first, but states that later as much as 0.5 to 0.6 Gm. may be given if necessary. The sodium salt is suitable for subcutaneous use in doses of 0.2 to 0.3 Gm. 0.3 to 0.4 Gm. of the drug correspond in action to 0.5 Gm. veronal or medinal. After-effects are very rare, and as much as 0.4 to 0.5 Gm. has been given daily by the author for three months without any undesirable symptoms. The indications are neurasthenia and psychoses and any condition of excitation or insomnia in the insane. Where there is pain, it is possible to reduce the opiate with this drug, particularly if administered subcutaneously. It is also probable that it will do a great deal of good in the withdrawal of morphine. After-effects seen with large doses were slight somnolency and lack of co-ordination such as are also seen with veronal. When given for a long time, it is desirable to omit the drug occasionally for a few days. Cumulative effects, if they occur, may be avoided by giving the patients plenty of water with sodium bicarbonate. In every case, the initial dose should be small.—Therap. d. Gegenwart.

Uses of Thorium X.

Thorium X may be used internally in suitable concentration or may be injected intravenously. Numerous experiments have shown that it causes a pronounced fall in blood pressure which lasts for a long time, hence the element may be destined to play an important role in the future in the treatment of arteriosclerotic conditions and heart disease. Some authors claim good results in gout and chronic rheumatism. In malignant tumors, the substance has been injected directly into the growth, but most authors report negative results. Great care is necessary and several fatal cases have already been reported. The symptoms of intoxication are those of severe gastrointestinal disturbances with diarrhea, colics and the vomiting of blood. An extreme leucopenia develops and at autopsy the changes of a hemorrhagic diathesis are found. G. Klemperer and H. Hirschfeld report on several cases of blood disease that had been treated with thorium X. The leucocytes were diminished and the spleen was considerably decreased in size in six out of nine cases of true leukemia. Good results were also seen where the X-rays failed to improve

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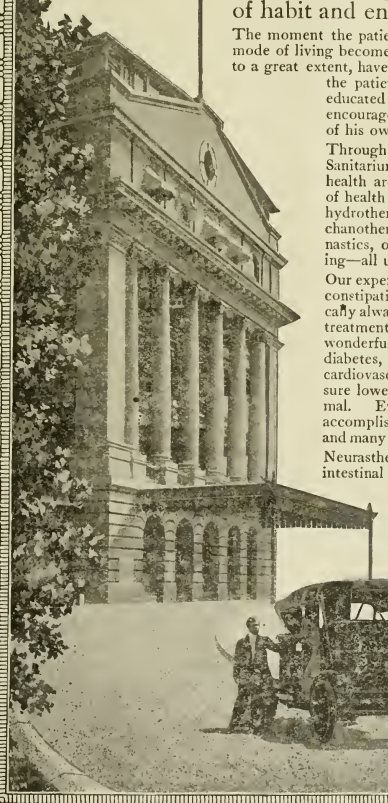

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the patients. Three cases of pernicious anemia were considerably improved, but in four there was very little effect. In the latter disease thorium X hardly presents any advantages over arsenic, but may yet be effectual where arsenic fails. In a general way, the author advises that the patients be first treated with arsenic. If this fails, they should receive subcutaneous injections of tartar emetic, 1 to 5 mg. and finally, as a last resort, thorium X.—Therp. d. Gegenwart.

Sublimate Bandage and Dionin as Substitutes for Operative Procedures on the Eye.

In many serious cases of eye disease, where an operation would ordinarily be indicated, much good often results from the use of dionin. Thus, R. Kaz mentions one severe case of glaucoma where the consent to an enucleation could not be obtained. The eye-ball was of stony hardness, there was hypopyon and keratitis and the pains were so severe that the patient could not sleep. No improvement was noticed until a salve containing ½ per cent. eserine and 5 per cent. dionin was prescribed. The following night the patient could sleep again and steady improvement followed. In many cases, however, it is better to prescribe the drugs in the form of powder. Sublimate dressings to the eye are especially useful in perforating wounds of the eye-ball where there is danger of infection and sympathetic ophthalmia. Even where an exudate is already present in the anterior chamber, it will generally disappear with the dressings. —Woch. f. Therap. u. Hyg. des Auges.

Treatment of Falling-Out of Hair.

Gastro-intestinal and nervous disturbances undoubtedly play a role in causing falling-out of the hair, but unquestionably the exciting cause in most cases is insufficient ventilation which allows of an accumulation of bacteria on the scalp. Shampooing is an excellent means of keeping the scalp clean and in a healthy condition, yet very often the same purpose may be accomplished by using a stiff brush which mechanically removes all dirt. The various lotions recommended contain soda, borax, salicylic acid, resorcin, euresol, carbolic acid, sublimate, captol, quinine, tar, etc. One of the best drugs, according to E. Kromeyer is sulphur in the following prescription:

Sulphuris Precip	20 Gm.
Alcoholis	70 Gm.
Glycerini	10 Gm.

M. Sig.: Shake.

This is well shaken and applied to the skin of the head in the evening and again removed with soap and water in the morning. In case of seborrhea oleosa the sulphur may be employed in the form of a powder after seampooing (sulphur ppt. and starch, equal parts). Preparations containing sulphur, such as ichthyol, may be employed in place of the sulphur. Where eczema has appeared, chrysarobin, pyrogallic acid or lenningallol are excellent substitutes. Where there is intense desquamation, light treatment is in place. In all cases, active treatment should be begun as early as possible.—Therap. d. Gegenwart.

The Roentgen Rays in Sarcoma.

According to the latest statistics sarcoma will be cured by the application of the X-rays in 18 per cent., considerably improved in 57 per cent., and not influenced in 25 per cent. Unfortunately, the time of observation in most of the cases reported as cured is usually not more than two years. Two cases with a longer record are reported by Max Levy Dorn. In one, lympho-sarcoma of the neck, treatment was begun in 1905 and carried through until the tumors had disappeared. In 1909 there was an enlargement of the glands in the groin without recurrence in the neck. These glands also disappeared with treatment and at present the patient is entirely free from tumors. The second case presented a periosteal sarcoma of the thigh and consent to an operation could not be obtained. Five years and seven months have elapsed since treatment and the patient has remained perfectly well. Though no pathological specimens were here obtained, there was no question as to the diagnosis since the X-ray findings were characteristic.—Berl. klin. Woch.

Carcinoma of the Esophagus.

Reviewing a recent article by von Kuester on carcinoma of the esophagus, E. H. Goodman wriies that as regards the degree of malignancy, one cannot make the hard and fast rule that the scirrhus form is relatively the more benign, as is often said of tumors of other structures. It is true that the medullary form grows more rapidly, invades the surrounding tissue more quickly, has greater tendency to metastasize, and as a result of the hemorrhage and toxins, leads sooner to cachexia; but with all this there is not the interference with food ingestion such as is seen in the scirrhus cancer.

Of the two forms, the medullary interferes the less with the activities of the patient, but there are no statistics to show what the duration of life is with either form.

Since the hard variety is more common, Kuester queries whether it is not possible to convert it into the medullary form, and then do away with gastrostomy with its attendant misery and mental effect. He has used, for two years, fibrolysin and bougies. Twice a week the patients received an ampule of fibrolysin (2.3 Cc.) subcutaneously in the epigastrium, and twice a week bougies were used. The author selected a whalebone bougie, and later employed the Trousseau sound. The olive tips of the latter were between 5 to 15 mm. in diameter. Any irritation of the tumor is avoided by the soft bougie, and a larger tip is only used when the previous one has been introduced with ease. Eight cases were treated in this way, and all obtained welcome respite from their sufferings.

The author states that although the use of fibrolysin in these cases is not without danger, as perforation may follow its employment, in extreme cases such as these, however, the danger should be disregarded, for the object is not to prolong life and its necessary suffering, but to make the few remaining days or weeks of the patient's deplorable existence as comfortable as possible.—Progressive Medicine.

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Blindness Due to Methyl Alcohol.

Methyl alcohol, still used to some extent to adulterate the cheaper grades of liquors is an intense poison which does not, however, affect all individuals in the same way. Thus, Harnack states that after a certain amount, 40 per cent. of the patients will die, 20 per cent. will become permanently blind and 40 per cent. will recover completely. Intestinal symptoms will be present in all. The extreme toxicity is not due to the alcohol as such, but is caused by its slow oxidation to formic acid, which also takes place in the nervous system. The ordinary alcohol is not poisonous, since it is much more rapidly burnt up to carbonic acid and water. Other drugs giving rise to blindness in a manner similar to methyl alcohol are nitrous acids and certain arsenic compounds, such as atoxyl. The blindness caused by quinine, cocaine and filix mas, on the other hand, is not caused by chemical processes, but is generally induced by a severe spasm of the retinal vessels, leading to occlusion of the vessels and atrophy of the retina.—Muench. med, Woch.

Treatment of Chronic Gastric Stasis.

In motor insufficiency of the stomach owing to perigastritis, carcinoma, adhesions, or other organic cause, an operation cannot always be done. In such cases, it has been customary to recommend daily lavage of the stomach, in order to remove the stagnating contents. This treatment is, however, very inconvenient and may even be actually dangerous. More recently, simple expression has been advised, but this also requires passing the stomach tube. Dr. Matthias Gockel lays great stress upon proper diet and proper antacid and antifermentative treatment. The latter, he believes, is best accomplished by using the 25 per cent. magnesium-perhydrol. This preparation is made up of 25 parts of magnesium peroxide and 75 parts of pure magnesium oxide. When mixed with stagnating stomach contents, nascent oxygen is at once set free and acts as a deodorant and antifermentative. The magnesium oxide unites with the acids present to form magnesium phosphate, chloride, carbonate lactate and sulphide. At the same time, the gases present are readily absorbed so that the hydrogen sulphide reaction can no longer be obtained. Theoretically, therefore, the preparation is an ideal one for the conditions mentioned and experiments in the laboratory with foul stomach contents have proven that the preparation really does what is expected of it. The dangers of autointoxication are much diminished; there will be less irritation of the mucous membrane of the stomach and hence less danger of spasm. Inasmuch as the magnesium salts are laxative, the constipation is usually also

corrected. Clinically, the author found less frequent attacks of pyloric spasm. The amount of urine was increased and the thirst was less intense. The patients no longer complained of distress in the gastric region, the eructations and vomiting were checked and the bowels generally moved without the use of cathartics. Most of the benign cases increased in weight and even in carcinoma there was considerable improvement at first. The author believes that in chronic motor insufficiency, the administration of magnesium-perhydrol will do away with washing out the stomach in most cases. The dose is a teaspoonful three to four times a day, in the afternoon and late in the evening and at night. If the bowels move too freely, morphine may be given.—Med. Klinik.

Some Manifestations of a Healthy Heart in the Young.

James Mackenzie has been impressed with the fact that a large number of young people are subjected to many forms of treatment because of the presence of certain phenomena which experience has taught him are signs neither of disease nor of impairment. Cardiac symptomatology has been involved in a state of confusion, not only with reference to the significance of irregular action of the heart, and of murmurs, but also with reference to prognosis. Practically every writer who gives the matter his serious attention is forced to admit that we do not possess the data on which to build a reasonable and sound prognosis. One of the greatest and most experienced clinicians, the late Sir William Gairdner, has accurately described the position of the medical examiner for life insurance in his method of estimating a life value. He says: "There is an incalculable element in most of the cases . . . which we deal with in the most curiously unsatisfactory way, either by rejecting the life altogether, or by putting on a big loading, which, it must be admitted, we assess upon no very sound or clear principles, or, on the other hand, by winking at the defect and passing it over." He points out that there are no reliable data on which to estimate the prognostic significance of murmurs and irregularities. This description of the absence of reliable data on which to base a prognosis holds good today, not only in life insurance, but wherever a prognosis is based on a physical examination.

Irregular heart action is a common manifestation, but one whose nature and significance are not clearly explained in textbooks. The great majority of heart irregularities can be divided into four groups, all differing in the mechanism of their production and in their clinical significance. These groups are the pulsus alternans, the irregularity of auricular fibrillation, the extrasystole, and the youthful type of irregularity. (1) The pulsus alternans is a form which is regular in its rhythm, but one in which a large beat alternates with a small one. The pulsus alternans occurs only when there is great exhaustion of the heart muscle. It may be that the exhaustion is only temporary, as in the tachycardias which arise from an abnormal action of the heart, or it may arise from exhaustion due to such profound alterations in the heart muscle that it indicates in many cases an exhaustion so extreme that death will shortly follow. (2) In auricular fibrillation the irregularity is of a very disorderly kind. From the point of view of the future life of the individual it has a varied significance. It occurs in 70 to 80 per cent. of all the cases of heart failure with dropsy. (3) The extrasystole is extremely common in adult life and rather infrequent in the young. It is due to a premature contraction followed by a long pause. The vast majority of people who show it are in good health and never suffer from heart failure. (4) The youthful type of irregularity is characterized by a variation in the length of the diastolic period. It may appear and disappear in the same individual for no perceptible reason. Every healthy individual probably shows it at one time or another. It is found most frequently and most markedly when the patient lies in bed after a febrile attack, but it is often found in boys and girls in perfect health. The author has watched those showing it grow up and pass into adult life and has never found a single case in which it has been associated with any form of heart failure.

Functional murmurs in the young in the absence of evidence of muscle affection are signs neither of disease nor of impairment. A murmur or an irregularity is of significance only when it is associated with some manifest impairment of the heart muscle. What are the evidences by which one can recognize affections of the heart muscle? These evidences are: (1) Increase in the size of the heart, due either to dilatation or to hypertrophy of its walls, particularly if associated with persistent increase in the rate of the heart and marked loss of power. (2) Murmurs are not necessarily a sign of dilatation. (3) The condition of the functional efficiency of the heart. This is the best and most accurate, and, in fact, the only reliable method of estimating the condition of the heart muscle. This method consists in finding out how the heart responds to effort and recognizing the symp-

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toms which indicate its exhaustion. The chief symptoms are subjective.

The method of estimating the heart's strength by testing the functional efficiency, which is the most essential part in every examination, has been to a great extent neglected. In proof of this one need only consider the insurance certificate which medical men fill out. All the questions are restricted to the physical examination and not one is directed to finding out the functional efficiency of the organ, by which only the facts which are essential to a prognosis of the heart's condition can be ascertained. Notwithstanding this fact, the books which are supposed to guide the medical examiner give no hint that such a method exists. The result is that individuals are accepted at normal rates because a physical examination revealed no abnormality, whereas if an inquiry had been directed to the functional efficiency of the heart, the symptoms of exhaustion which heralded the unexpected death of the individual would have been revealed. On the other hand individuals are rejected for life insurance because of the presence of some harmless manifestations, whose significance the examiner does not understand, and whose value he cannot appreciate, simply because he fails to apply and to appreciate this method of testing the heart's efficiency.—British Medical Journal.

Antiscarlatinal Serum.

Reiss and Jungmann (Deutsch. Arch. f. Klin. Med.) reports the employment of serotherapy in scarlet fever in 12 cases, and call attention to the remarkable turns for the better in 10 of these patients after an intravenous injection of from 40 to 100 Cc. of serum drawn from several scarlet fever convalescents and mixed.

The temperature and pulse dropped by nearly 3° C. in from nine to fourteen hours the drop beginning after two to four hours. The serotherapy did not seem to have the sligtest action on any secondary phenomena the lesions in the tonsils, lymph nodes and joints continuing or developing unmodified by the serotherapy. This fact is regarded as proof of the efficiency of the serum, as the fever dropped and the general condition materially improved notwithstanding the presence or progressive course of a destructive angina, for example. They now make it a rule to apply the serotherapy only in those cases in which recent scarlatinal infection is responsible for serious symptoms. The patients all began to convalesce the fourth day or fifth at latest, while in 200 other cases the fever lasted from four to fifteen days, with an average of six days. The fever terminateb dy crises in only 2 of these 200. while this occurred in all the 10 serum-treated cases. They prefer to centrifugate the serum from at least three convalescents and distribute it in fused ampullas containing each 50Cc. to which 5 drops of a 5 per cent phenol aolution has been added. Each separate serem is tested beforehand by inoculation and for the Wassermann reaction.

Diffuse Gonococcal Peritonitis;

The important part played by the gonococcus in the etiology of lacalized pelvic peritonitis in the female is generally conceded; not so, however, the fact that a diffuse purulent peritonitis may result from a pure gonococcal infection.

Albrecht (Munch. med. Woch., 15th October 1912) records four cases of the latter condition, the gonococcus being recovered in pure culture from the exudate in each case. The clinical picture in each was the same, viz., sudden, very acute, onset, the development within a very short tims of the signs of a severe diffuse peritonitis, and the rapid subsidence of all symptoms after operation, fully bearing out the dictum of Doderlein that "gonococcal peritonitis, in spite of its acute charater, is distinguished by its rapid course and favorable termination."

The casee comprised three females and one male, and in all, the diagnosis before operation was "acute appendicitis." At the time of onset of their abdominal symptoms three of the putients were suffering from acute gonorrhoea. In each case on opening the abdomen a quantity of seropurulent fluid escaped, and the infection was seen to be diffuse, if not generalized. An immediate microscopic examination of the benign nature of the iufection the abdomen was closed without drainage in three of the four cases. The recovery in all was rapid and unventful.

In one case repeated differential blood counts were made to determine if there were present the eosinophilia on which several writers have laid stress as a sign of an ascending gonorrhoeal infection; on no occasion, however, was the slightest degree of eosinophilia found.

Albrecht claims that these are the first undoubteb cases of diffuse gonococcal peritonitis which have been recorded. He believes that in them the rapid spread and diffuse character of the peritonitis was due to a specially virulent strain of gonococcus, which by its rapid spread allowed the peritoneum no time to form the plastic fibrinous adhesions which characterise the usual pelvic type of gonococcal peritonitis.—Edinburgh Medtcal Journal.

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The regular monthly meeting of the Chester County Medical Association was held in Chester, S. C., on February the 3rd. The officers elected for the ensuing year are as follows:

Dr. W. M. Love, president; Dr. C. E. Crosby, vice-president, and Dr. J. G. Johnston, secretary and treasurer. Dr. H. E. McConnell was elected a delegate to the State Medical Association that meets at Rock Hill in April, Dr. A M. Wylie, alternate.

A committee, composed of Dr. S. G. Miller, chairman; Dr. W. R. Wallace and Dr. J. G. Johnston, was appointed to cooperate with the Civic League of Chester.

It is reported that Spartanburg County, S. C., is to have the first hospital in the world for the treatment of pellagrins.

The hospital will have the support of the Thompson-McFadden pellagra commission, which has been studying the disease in Spartanburg Couny during the past year.

Dr. J. C. Massey, a prominent physician of Rock Hill, S. C., died at his home on January the 20th. He was 64 years old.

T Cohenway Sanitorium, at Conway, S. C. will be opened for the reception of patients about March the first. This will be an up-to-date little hospital, and every effort is being put forth to make it an inviting place for sick people.

When completed it will cost about $10,000,00. Dr. Scarbough, a recent graduate of the South Carolina Medical College will have charge of the institution.

The Columbia Medical Society, Columbia, S. C., has rented a room in the Y. M. C. A. building for the purpose of establishing a library. Current literature on medicine and scientific text books, histories and works of all kinds bearing on the science of medicine will be collected.

The library is on the second floor of the new Y. M. C. A. building on the Hampton street side and is amply large. This society now has an enrollment of 62 members, the largest membership in its existence, and is in a very prosperous condition.

The Wilson Sanatorium at Wilson, N. C., will, in the near future, add a charity ward to its building. This institution is doing a commendable work, and the addition of this ward will mean much to the management of this hospital.

The Knowlton Hospital in Columbia, S. C,, has just completed its new annex. This is one of the largest and best equipped hospitals in the Carolinas. It is up-to-date in all its appointments.

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Genito-Urinary Diseases—Dr. P. V. Mikell.

Eye, Ear, Nose and Throat—Dr. Henry Horlbeck, Dr. Robt, L. Moore,

Diseases of Stomach—Dr. F. M. Durham.

Pathology and Bacteriology—Dr. H. M. Smith.

Diseases of Children—Dr. Wm. Weston.

Obstetrics—Dr. Lindsay Peters.

Orthopœdic Surgery—Dr. J. H. Taylor.

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There is much interest being brought to bear in South Carolina at the present time concerning the establishment of another medical college. The medical college of South Carolina, in Charleston, is the third oldest medical school in America, and has done a great work.

The question now is whether the State will build a new college or endow the old one. There seems to be quite a controversy as to just where this institution shall be

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located, in Columbia or in Charleston. Either of these cities have sufficient hospital and clinical facilities to afford students clinical instruction.

The Legislature of South Carolina will in all probability take this matter up within the next few weeks.

The Eighth District Medical Association of South Carolina met in Batesburg on January the 15th. This district is composed of the counties of Aiken, Edgefield, Lexington and Saluda.

Dr. D. B. Frontis, of Ridge Spring, is president; Dr. Robert A. Marsh, of Edgefield, secretary; Dr. W. P. Timmerman, of Batesburg, councilor. Interesting clinics were exhibited by Drs. R. H. and W. P. Timmerman and W. S. Kneece. Dr. R. H. Timmerman, of Batesburg, read a paper on "Signs of Pregnancy," Dr. D. M. Crosson, of Leesville, on "Icterus," Dr. T. G. Croft, of Aiken, on "Diabetes," Dr. Filmore Moore, of Aiken, on "Hygiene and Sanitation," Dr. A. S. Ballinger, of Monetta, on "Uræmia," Dr. T. A. Quattlebaum, of

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Columbia, on "A Plea for Children." Dr. A. B. Knowlton's paper on "Cystoscopy" was read by Dr. Edyth Welbourn, of Columbia. The clinics and papers were freely discussed.

The next meeting will be held in Lexington, S. C.

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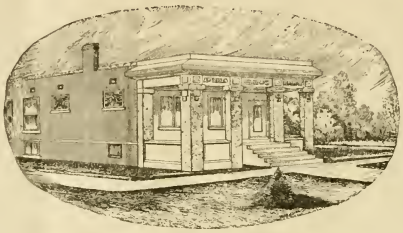

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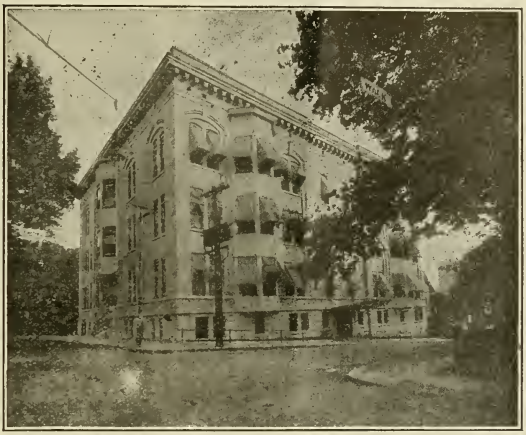


The Main Building Front View.

The following directions are suggested for the benefit of those who may forward material for examination.

All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.

Seventh Street Entrance.

The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test. — After carefully washing, prick the lobule of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and allowed to dry without being spread out on the suface of the slide. After they have dried, the

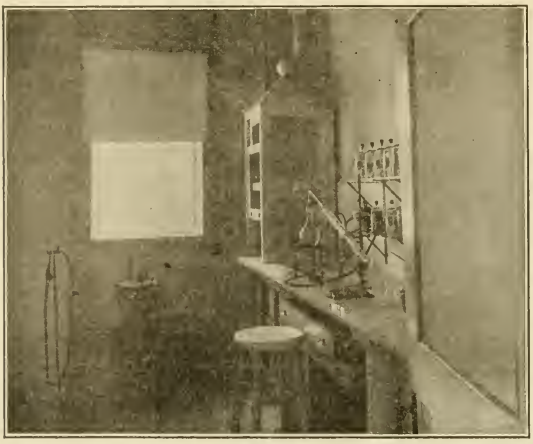
slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

Second Method.—Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count. etc., should be sent to the labaratory on glass slides. As thin a smear as possible should be made.

Clinical Laboratory, Showing Arrangement of Desks, Miscroscopes, Microtomes, Incubator, Centrifuge, Etc

Smears For The Detection of Gonococci.—One drop of purulent discharge from the urethra should be placed at one end of a clean slide and a thin smear made over the surface of the slide.

In collecting a specimen from a female patient, care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a sterile swab or other instrument. Two smears should always be sent to the laboratory.



Clinical Laboratory, Showing Autoclave, Hood, Operating Tables, Etc.

Urine.—for bacteriological examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15-20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlich's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological.—material from either operation or autopsy should be wrapped in gauze moistened with salt solution surrounded by oiled paper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and the material from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They should rest upon a pad of absorbent cotton, which is placed in the bottom of the jar before

the tumoris dropped in.

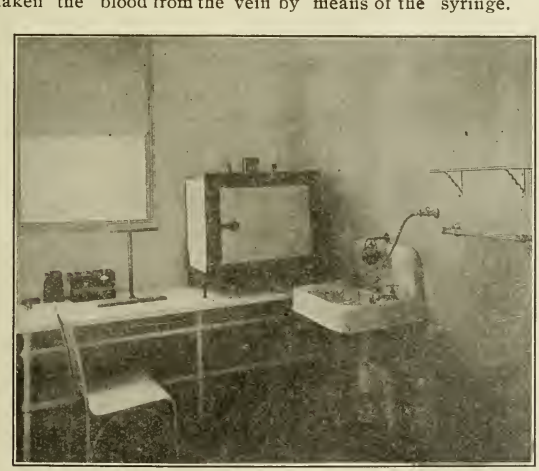
Feces.—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

Wassermann's Test.—Since the advent of the discovery of 606 for the cure of Syphilis. the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.

(Clinical Laboratory, Showing Supplies, Working Table. Etc.)

Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourinquet applied, taken the blood from the vein by means of the syringe.



Clinical Laboratory, With Hot Air Sterilizer, Scales, Lavatory, Etc.

2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourinquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohollam , or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tue, allow to coagulate, cork, pack and mail as any other fraigle package. Atleast two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk.—The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents.—should be sentin a sterilized bottle. Alarge vaseline or quinine bottle usually answers the purpose.

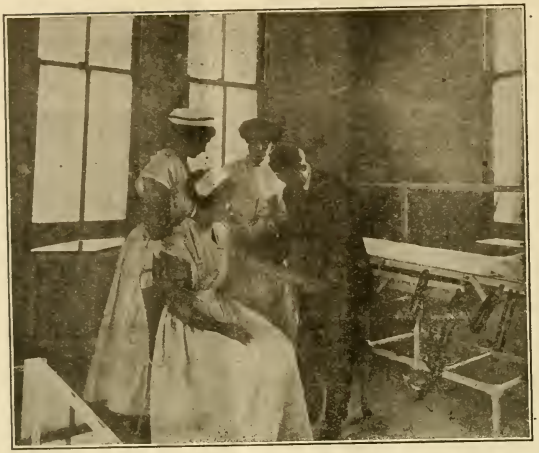


Fig 1.

Fig 11.

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Cultures and isolation of bacteria..... 5.00
Stomach Contents 2.00
Widal Test..... 2.50
Tissue Sections.. 5.00
Tuberculin Test. 5.00
Wassermann's Test 10.00

Milk.

Chemical 2.50
Bacterial 5:00
Water analysis, bacterial examination.. 5.00
Chemical examination including alkalinity, chlorides, ammonia, nitrites and nitrates ...5.00
Quantitative analysis ..... $10.00 to 25.00
Culture Media (per tube) ..... .25
Sterilized tubes and pipettes ..... .15
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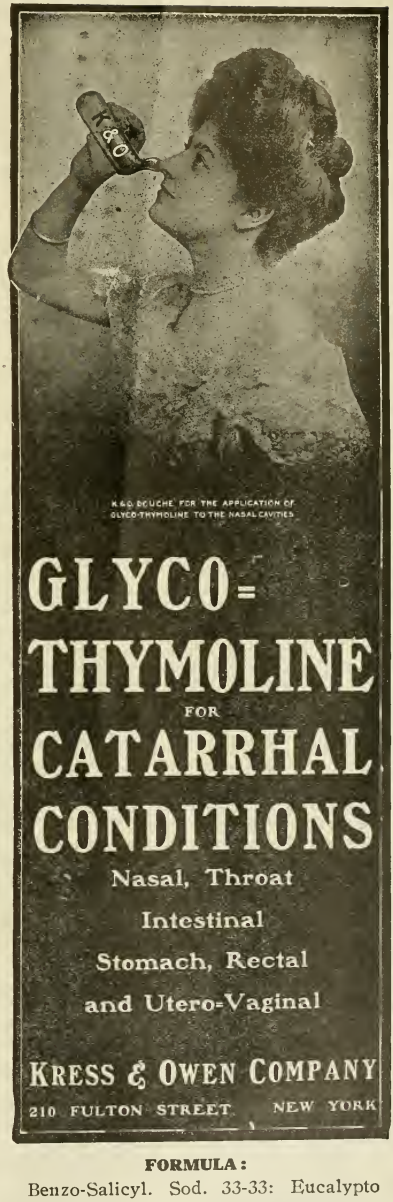
Fatal Poisoning Due to the Use of Picric Acid as a Dusting Powder for a Burn.

In his well-known work on toxicology the late Dr. J. Dixon Mann stated: "Very few cases of picric acid poisoning are recorded, and none with fatal results." However, since the use of picric acid as an application to burns become popular, many cases have been recorded in which toxic effects were produced. The usual application is a saturated solution (approximately one per cent). The symptoms of picric acid poisoning are rapid pulse, papular or erythematous rash, and yellowness of the conjunctiva and skin. There may be vomiting and diarrhea. The urine is discolored and has been variously described as dark-red, dark-green, or port-wine color. As long ago as 1903 Mr. A. MacLennon reported in the columns of the Lancet two cases in which toxic effects followed the use of picric acid in burns. In one case the acid appeared to have played a part in producing a fatal result. A saturated watery solution was applied with benefit to a burn from steam so extensive that recovery was very doubtful. After about three days a



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brilliant-red "measly rash" developed. The temperature became high and the urine of a dark-greenish hue, and the patient died comatose. In the other case—burn of the arm and leg—the same rash developed and the general disturbance was extreme. However, these two cases were the only ones, out of many hundreds, in which toxic symptoms were observed. Another case in which severe symptoms were produced was reported by Dr. E. J. Elliot.

In the South Africa Medical Record of July 13 Mr. J. A. Mitchell has reported the case of a European girl, aged two years and three months, who sustained a severe burn of the left foot due to boiling fat. Her mother cleansed the burn and treated it with a dusting powder from a "first-aid" outfit supplied by an agent of the St. John Ambulance Association. The dusting was repeated at intervals for fourteen days. Eighteen days after the accident the child was taken to a medical man. The skin of the lower half of the left leg was of a bright-yellow color. There was a large brownish-yellow patch on the right side of the trunk and similar patches over the elbow and knees. The conjunctiva and skin generally had a dusky, yellowish tinge. The urine was of brownish color and micturition was frequent and apparently painful. The pulse varied from 100 to 150. The child assumed a frightened look when spoken to even by her mother. There were vomiting and severe diarrhea, with yellowish slimy motions. Three days later general erythema developed. The child became stuporous, collapsed, and died on the twenty-second day after the accident. A necropsy was held by the district surgeon, Dr. A. J. H. Thornton. The skin and whites of the eyes showed a yellowish tinge. There was an erythematous rash, with dry, thickened, and slightly scaly skin over the left side of the chest, left leg, and right elbow. The bases of both lungs, the liver, and the spleen were congested. The kidneys were normal. A sample of the dusting-powder used was analyzed by Mr. Lewis of the Government Analytical Laboratory, Grahamstown, and found to consist of picric acid 17 per cent. and boric acid 82 per cent. The contents of another tin from a St. John's "first-aid" outfit were found to be badly mixed; lumps of boric acid up to the size of a pea could be picked out, and analyses of samples from different parts of the tin yielded percentages of picric acid varying from 5.9 to 7.1.

Picric acid has proved a valuable, and in general safe, application in the treatment of superficial burns. But the more numerous but less serious recorded cases of toxic effects show that care should be exercised in the case of extensive burns and a watch kept for symptoms. The case just related seems to us an emphatic condemnation of the practice of supplying picric acid in a "first-aid" outfit for the use of the public. A one per cent. solution is recommended by His Majesty's inspectors of explosives to be kept handy for "first-aid" for burns. Probably a single application would be quite free from danger, but the proclivity of some of the laity for amateur doctoring is well known, and having learned from this recommendation that picric acid is a "good thing for burns" they may, as in one case reported, continue the treatment. It seems to us that a warning of some kind should be given on the label of the bottle.—The London Lancet.

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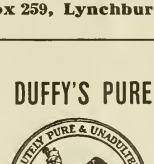

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logical condition caused by the pneumococcus.

Complete literature on the phylacogens has been issued by Parke, Davis & Co., and may be obtained from the company's home offices in Detroit, Michigan. Physicians are advised to avail themselves of this opportuuity.

State Board Examination Questions of Georgia.

ANATOMY.

1. Name bones of the head. What are the Wormian bones?

2. Name articulations of occipital and of parietal bones. Name bones articulating with humerus.

3. Name divisions of vertebral column, giving number of bones in each division. What are distinguishing characteristics of cervical vertebræ?

4. Describe briefly the pleura. What is cohtained in the middle mediastinum? Name the openings in the pharynx.

5. Locate and briefly describe the gall-bladder. Give anatomical relations of appendix vermiformis.

6. Name abdominal viscera wholly covered with peritoneum; those partly covered.

7. Give relations of womb, ovaries, and Fallopian tubes.

8. Name the nerves of the special senses. Give origin of eighth aud ninth pairs. In which part of spinal cord are motor and sensory nerve fibers located, respectively?

9. Give origin and insertion of biceps muscle. Locate pectoralis major and minor muscles. Give origin and insertion respectively.

10. Name component parts of the spermatic cord. Name divisions of male urethra. Where are ureters located?

PHYSIOLOGY.

1. What is the normal temperature of the body? Give two physiological reasons for increased temperature.

2. Give in detail the functions of the liver and gall-bladder.

3. Name the physical properties of normal urine.

4. Locate the spleen and thyroid gland and give the function of each.

5. What is aphasia? Give the different forms and causes of each.

6. What is the difference in the development of the motor and sensory nerves?

7. What is respiration? Name four things that happen to the blood in the lungs.

8. Describe the red and white blood corpuscles and the work of each.

9. Describe mouth, gastric, and intestinal digestion.

10. Why and how should physicians cooperate with all that promotes community health?

MATERIA MEDICA AND THERAPEUTICS.

1. Give treatment of syphilis.

2. Define galactagogue, sialagogue, hydragogue, cholagogue, and an anthelmintic. (a) Name a drug as an example of each.

3. What are the physiological effects of digitalis and how does it differ from strophanthus? (a) In what diseases would you administer digitalis?

4. (a) Define materia medica. (b) Therapeutics.

5. Write a prescription for a collyrium and for a suppository. (a) Give the treatment of scabies.

6. Give treatment of (a) opium poisoning, (b) carbolic acid poisoning, (c) bichloride of mercury poisoning.

7. Name five official preparations of iron; five of mercury.

8. Name three vasomotor stimulants; three vasomotor depressants.

9. Give the treatment of an acute case of dysentery.

10. Mention three drugs that are administered internally to arrest hemorrhage. (a) Name three to promote menstruation.

PATHOLOGY.

1. Differentiate pyemia and septicemia.

2. Definition of inflammation.

3. Name the four orders of phenomena characterizing an inflammation.

4. Why will an incised wound heal more readily than a contused one?

5. Why is a punctured wound more liable to produce tetanus than an incised one?

6. Difference between aerobic and anaerobic bacteria.

PRACTICE.

1. (a) How would you make a diagnosis of typhoid fsver? (b) What drug would you use to differentiate typhoid from malarial fever? (c) What typhoid prophylactic measures would you employ in typhoid fever? (d) How would you treat intestinal hemorrhage of typhoid fever?

2. (a) Make differeutial diagnosis between bronchopneumon and croupous pneumonia. (b) Differentiate unresolved pneumonia and pyemia?

3. (a) Differentiate between mitral insufficiency and aortic insufficiency. (b) What do you understand by broken compensation of the heart, and give treatment for same.

4. Make diagnosis of acute uremia and give treatment.

5. Give differential diagnosis of catarrhal and obstructive jaundice and treatment of each.

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The Use of Quinine in Hemoglobinuric* Fever.

By Edgar M. Long, M.D., Hamilton, N. C.

In reading a paper before this assembly, it seems to me that an effort on my part to tell you what I have seen and done in my little three years of practice would be the height of presumption, to put it mildly. Personal observation aside, there is but one alternative left me, obviously, and that is to draw on the experience of others, this being most conveniently done by reference to text. This I have done but, at the same time, have paid due attention to the opinions of those who have viewed the matter from possibly a more practical standpoint than have many of the authors, and have attempted to correlate and reconcile the two. This, in itself, is a rather tedious and difficult task and of how far I have succeeded, you must be the judge.

The use of quinine in hemoglobinuric fever has been the subject of the most bitter dispute in time past and is now a far from settled question. A no less competent observer than the immortal Koch, probably within the memory of some of us here, raised an endless commotion by asserting that hemoglobinuric fever is not malaria and that he had seen no case in which quinine had not been used prior to the hemoglobinuria but, on the other hand, could not prove that quinine caused the condition in all cases. He thus left the impression among most physicians and the laity that he believed quinine to be the cause but could not prove it. This raised a bitter argument, and for some years it was necessary to resort to the most blatant falsehood and deception in order to administer quinine at all in any disease in some sections on account of the prevalent belief that it would set up the dreaded "black-water fever."

That quinine does cause recrudescence and aggravation of the hemoglobinuria where it has existed or does exist has been too thoroughly proven by too many competent observers to leave room for doubt. I, myself, have seen cases in which the aggravation, to my mind, was referable to nothing else, and these cases invariably terminated in death. On the other hand, quinine is *the specific* for malaria and, in the opinion of some, must be given whenever and wherever the malarial parasite is etiologically connected with the condition, thus making it the remedy *par excellence* in hemoglobinuric fever as well as in other forms of malarial manifestation. This difference of opinion is the problem, and it is up to the medical men of this generation who work in the black-water fever districts to solve it, and the result of its proper solution will constitute the basis for the future treatment. Up to the present time almost every physician dealing with the disease has a treatment of his own which he does not attempt to explain theoretically but for which he claims more or less merit according to the "luck" he has had.

Several theories have been advanced to account for the occurrence of the hemoglobinuria and for the deleterious effect of quinine, some of which have good points, but all having weaknesses which render them more or less worthless. According to Haig, the presence of uric acid in the blood is the predisposing cause of hemoglobinuric fever and that quinine sulphate, being about one-fifth xanthin, which is the practical equivalent of uric acid, precipitates the attack. Opposed to this is the fact that rheumatic and gouty patients may have repeated attacks of malaria, having in their blood at the same time an excess of uric acid and enormous numbers of malarial parasites without having the slightest tendency to black-water fever. The theory that quinine gains access to the parasite while in the erythrocyte by endosmosis through the cell-membrane, causing death of the parasite and consequent disintegration of the erythrocyte, the hemoglobin of the broken down erythrocytes being eliminated through the kidneys and giving rise to the hemoglobinuria, looks good at first, but there are numerous cases of simple malaria showing enormous numbers of the parasites even in the peripheral blood and to whom quinine has been given in enormous doses, who show no sign of hemoglobinuria. Deaderick sets forth a theory which comes nearer covering the ground than any of the others. He shows that the constant presence in the blood of free hemoglobin causes the blood to develop a hemolysin which, under most conditions, is more or less perfectly balanced by an anti-hemolysin, and concludes, (and this is where the theory is weak), that if, (to quote), "this equilibrium is greatly disturbed by fresh malarial infection, quinine, exposure, fatigue or other, and probably unknown factors, hemo-

*Read before the Second District Medical Society of North Carolina at Williamston, N. C,

lysis occurs and hemoglobinuria ensues." This theory beginning so beautifully, leaves us at its end just as absolutely in the dark as to the action of quinine as we were before.

There is an explanation which strikes me as being the most probable when considered in the light of our present knowledge of immunity and hemolysis, but this is only a hypothesis and does not even deserve the name of "theory," inasmuch as no steps have been taken to prove it, and no proofs exist except certain experiments made by others in endeavors to prove something else, but a good many of these point strongly in favor of the hypothesis which I will attempt to state.

The theory of immunity has been too often and too ably stated to need more than a few words here but, just by way of leading up to the subject, we will consider the classical case of the guinea-pig and the rabbit, two animals of different species.

If the guinea-pig be injected with a portion of the blood of the rabbit, the injection is followed by no appreciable effect on the guinea-pig; but if the guinea-pig be inoculated with graduated, ascending, periodic doses of the red blood corpuscles of the rabbit, there is still no appreciable effect on the guinea-pig, but if some of the guinea-pig's serum be now injected into the rabbit in sufficient quantity, a marked hemolysis of the rabbit's erythrocytes occurs. The serum of the guinea-pig has worked up an active immunity against the erythrocytes of the rabbit, this immunity being dependent on the presence of a hemolysin in the serum of the guinea-pig formed by the interaction of the amboceptor, formed under the stimulus of the rabbit's erythrocytes, with the complement, normally present in the blood. Now let the rabbit be inoculated with graduated, ascending periodic doses of this hemolytic serum of the guinea-pig, and this serum, so highly toxic at first to the red cells of the rabbit, gradually loses its toxicity until the rabbit can stand large doses without any sign of hemolysis. The rabbit's serum has developed an antihemolysin which holds in check the hemolysin in the serum of the guinea-pig. Now, let's take the thing the other way 'round. Let the rabbit be inoculated with the red cells of the guinea-pig until the rabbit's serum develops an immunity against the guinea-pig's red cells and becomes capable of causing hemolysis in the guinea-pig. Then, let us immunize the guinea-pig against this hemolytic serum of the rabbit by ascending inoculation.

We now have two animals of different species, the blood-serum of each having an active hemolytic action against the red cells of the other, but this hemolytic action of the serum of each being neutralized, or certainly held in check, by the antihemolysin in the serum of the other, and the bloods of the two animals capable of remaining together without doing harm to each other, but requiring only the destruction of the antihemolysin in the serum of the other to become actively hemolytic toward the other's red cells. This does not mean that they become so much alike as to dwell together in peace and harmony, but that each has the power to endure the other, and the antihemolysin in each one's serum is the only thing standing between his erythrocytes and destruction. Whether this condition could last indefinitely or not has not been proved, but the analogy with malaria, as will be shown later, would indicate that it is only temporary.

Now let us take the case of the malarial parasite and the human body, animals certainly of different species, and let the human be inoculated with graduated, ascending periodic doses of the parasites, as doubtless happens in certain cases of chronic or latent malaria. It stands to reason that the human will develop an active immunity against the parasites, and that they would be destroyed but for the fact that, at the same time, the parasites, *acting as the blood of another animal*, develop an antibody of their own which holds in check the destructive action of the human serum. Also, simultaneously, the juices with which the parasite surrounds itself and which correspond to the human serum, by constant inoculation with red cells of the human organism, develop a destructive immunity against them and would destroy them but for the development in the human serum of an antibody to combat it. This hypothetical destruction of erythrocytes by the juices or "toxins" of the parasites is entirely apart from the erythrorrhexis brought about by sporulation of the parasite, and really does not occur in the condition under consideration on account of the antibody in the human serum. It seems to be pretty generally conceded that the human serum develops some sort of immunity against the malarial parasite, but so far I have been unable to find anything in the literature about a development of an immunity against the human serum by the parasite, although its occurrence seems to me only a natural inference.

We now have the two bloods, so to speak, the human blood and the malarial parasites with their surrounding life juices, living together, not in a state of harmony but, rather, in a state of armed peace, neither able to get rid of or to do any harm to the other. Evidently this state of affairs can-

not last indefinitely, for all this time the malarial parasite is working its ravages by means of its toxins in tissues of the body other than the blood which do not enjoy the same immunity as the blood. The human organism is being slowly but constantly damaged and its army, the serum and phagocytes, which usually defends it so well, after a brief struggle, has apparently made friends with the enemy, mingling with the opposing forces and even furnishing them provisions. Certainly this will not do. Something must be done to break it up. But what? The parasites have already resisted the usual method of procedure against an enemy, and for every toxic product that the blood has elaborated for their destruction they have promptly elaborated an antibody, and the blood's toxin, when launched into the circulation, has been anticipated and takes no more effect on the parasites, for whom it was intended, than it does on the body's own red cells. But something has to be done. The blood, or toxin-making organs wherever they ure situated, can, under stress of circumstances, manufacture something entirely new which will wipe out the whole business, friend and foe alike, leaving the ultimate result of life or death up to the blood-making organs and luck. The parasites will be killed out but, along with them, the erythrocytes will have to go too, and if the blood-making organs are sufficiently active to recruit new blood elements fast enough, a recovery follows; otherwise, a death.

Of course, all this is purely figurative, but it seems to be the best medium of expression by which to make myself understood. Let us go over it again and be a little more specific, translating the foregoing into more scientific terminology.

The parasites, when introduced into the blood, make toxins. This has been proven by experiment. These toxins, after circulating with the blood, finally pass into the liver where, according to Ehrlich's Side Chain Theory, they meet with certain receptors of certain atom-groups of the liver cells. Some of these receptors, (there being some which seem to be specific for all toxins to which flesh is heir,) have the power of combining with these toxins through the toxin's haptophore group and the toxin immediately proceeds to pick the molecular structure of the cell to pieces by means of its toxophore group. So far, the toxin seems to have the best of the argument; but when all the specific receptors of the cells have been combined with by toxins the deficiency is met by over-production and some of the receptors gain access to the circulation and constitute the "antitoxin" and serve to protect the cell from further inroads of the toxin by combining with it before it reaches the cell. The presence of the parasites themselves stimulates the production of amboceptors which serve to unite the complement, a normal constituent of the blood, with the parasites, when the complement proceeds to pick the molecular structure of the parasite to pieces by means of its zymophore group exactly as the toxin of the parasite poisoned the human cell when united to it through a receptor by means of its toxophore group. The amboceptor plus the complement, then, constitute the parasitolysin, if you will pardon a coined word.

The complement is a biologic product elaborated by an animal for the purpose of defending the animal from invasion by deleterious organisms. It consists of two chief atom-groups or chemical radicals, one of which, the zymophore group, has the power of disintegrating the protoplasm of a cell when combined with it through the medium of the amboceptor. The other atom-group of the complement is the one with which the amboceptor combines and is called the haptophore of the complement. Let us bear in mind for a few minutes that this complement can poison any cell with which it may become united through the amboceptor, and that the complement is a normal constituent of the blood.

The amboceptor is a substance elaborated by the animal under the stimulus of invasion by harmful organisms and consists of two haptophore groups through one of which it combines with the complement's haptophore group and through the other with the invading cell, thus exposing this cell to the poisonous action of the zymophore group of the complement. The amboceptor is manufactured as need arises and is literally made to measure. The group of the amboceptor which combines with the complement is termed the complementophile; that which unites with the invading cell, the cytophile. The molecular structure of the cytophile group varies with the type of the invading cell, and the object at which the body seems to aim is to produce an amboceptor whose cytophile group shall be capable of uniting with the invading cells and with them alone, for if the amboceptor should unite the complement with one of the body's own cells, the complement would destroy that cell just as much as it would an invading cell. The amboceptor, then, is the specific part of the bacteriolysin, hemolysin or parasitolysin.

From analogy we may suppose that the juices of the human body are just as much toxins to the malarial parasite as its juices are to the human body. The parasite is not blessed with a liver for the human toxin to

pass through and be made inert, but the parasitic cell, being a biologic entity, has all the adjuncts of all the differentiated cells of the human body, only in a less highly specialized degree, and is therefore capable of surrounding itself with free receptors which combine with and render inert the (from the parasite's point of view) toxins of the human organism. Also, the cells producing the human toxin stimulate the parasite to form an amboceptor specific for them which will combine with the human cell and with the complement at the same time and expose the human cell to the poisonous influence of the zymophore group of the complement.

Immediately, the parasitolysin produced by the human organism is met by an antibody of parasitic origin which combines with the cytophile group of the amboceptor and prevents its uniting with the parasitic cell, thus protecting the parasite. Also the hemolysin made by the parasite is met by an antibody of human origin which protects the human cell in the same way, and we have a balance or equilibrium in which the parasites cannot harm the blood except for the comparatively few red cells used by the parasites in their endogenous cycle, and the blood is unable to destroy the parasite by means of its contained parasitolysin. The parasite and the red cell have come to tolerate each other, and the parasitolysin of the blood which should kill the parasites without harming the red cells is of no effect. In other words, the amboceptor of the blood which should combine with the parasite and then with the complement finds its atom-group by which it was to combine with the parasitic cell already filled up with one of the parasite's antibodies.

The blood has one more resort. It can generate another amboceptor for which the parasite has not made an antibody, and this amboceptor *will* join the parasite and the complement together by taking hold on the parasitic cell by an atom-group higher up in the parasite's molecular structure. This has one disadvantage, because the higher up we go, the nearer are the atom-groups of all protoplasm alike, and an amboceptor whose cytophile will take hold on one of these higher groups of the parasite will also take hold on a higher group of the human red cell. It is imperative to get rid of the parasites because they are causing pathological changes in the various viscera and, if the malaria is untreated and affairs get in this critical condition, the blood, liver and other amboceptor-making organs, if others exist, make one last supreme, desperate effort to throw off the invading forces by generating an amboceptor which will combine with the parasites as well as with the body's own red corpuscles; in other words, the human body, like Napoleon, turns its cannon on its own forces in order to get the enemy at the same time. Of course, when this new ambocepter is launched into the circulation there is a widespread destruction of parasites but, at the same time, there is an equally widespread destruction of erythrocytes. This fully explains the rapid disappearance of the parasites which nearly all observers have noted following the onset of the hemoglobinuria even in cases in which quinine is not used. Mannaberg gives the following figures in this connection:

Day before attack parasites present in 95.6% of cases.

Day of attack parasites present in 63% of cases.

Day after attack parasites present in 17.1% of cases.

These figures prove conclusively to my mind that the effect and purpose of the hemolysis is to rid the human organism of the malarial parasites, an effort on the part of the body to shake itself clear of the infection that is so insidiously sapping its vitality, and not a direct pathological effect of either the malarial parasites or their toxins. There is an almost identical analogy to the modern view of inflammation.

We may consider, then, to sum up, that the blood tries two methods of destroying the parasites: (1) it generates a toxin capable of killing the parasites without doing damage to the blood elements. If this fails owing to the production of antibodies on the part of the malarial parasites, it (2) produces a still more highly toxic substance which *will* kill the parasites and simultaneously cause destruction of the red blood corpuscles, or hemolysis. I could cite experiments done by some very famous workers in efforts to prove other things which support this theory even more than the theories which they were intended to prove, but lack of space prevents. However, if you will read in Deaderick's "Practical Study of Malaria" the chapters devoted to hemoglobinuric fever or, better still, the whole book with what I have read in mind, I think you will agree with me on most of the points at least.

Now let us go back and consider the action of quinine, not only in hemoglobinuric fever, but in malaria in general. To quote Deaderick again, under the head "The Action of Quinine on the Malarial Parasite," he says on page 349, "The exact manner in which quinine destroys the parasite of malaria is not certain. Whether it acts as a direct poison to the parasite, or by stimulating phagocytosis, or by increasing the fluorescence of the blood, or by

forming indigestible compounds with the blood elements has not been determined." In 1881 Laveran found that the addition to the blood containing parasites of quinine in the proportion of 1:10,000 caused death of the parasites and concluded even at that early date that it was to this destruction of parasites that quinine owed its efficacy in malarial fever. But this quinine was added to the *blood*. Would it have acted in the same manner if there had been no blood present when the quinine came in contact with the parasites? Obviously, this question can be answered with certainty only when someone succeeds in cultivating the parasites. Let us assume, however, that it would not; that the quinine is dependent for its antimalarial action on the presence of a certain amount of blood. We have no grounds sufficient to justify this assumption but it fits in with the rest of the hypothesis and we will assume it anyway, let us say, for sake of argument. Certain it is, however, that quinine seems to have little or no effect in certain cases where there are parasites in plenty and where the quinine is absorbed beyond doubt as evidenced by the symptoms of cinchonism and, while we are assuming, we may as well assume also that this lack of efficiency is referable to the condition of the blood in these cases. I ask your pardon for this comparatively groundless assumption and assure you it is the only one I have made in this paper. In defense of it I may say that if quinine is sufficiently poisonous to the parasites or invading organisms in a strength which is non-toxic to the host, it is the only case that I know of in which an antiseptic has the power of selectively acting on the invading organism without exerting the same deleterious influence on the human body. Is it likely that a solution of quinine is going to be so obliging as to pick out the malarial parasite and poison it and let the blood elements go scott free when both are equally exposed? I am too much of a pessimist to believe it.

As we have been saying, there is normally present in the blood a complement which forms an active parasitolysin when combined with an amboceptor specific for the malarial parasite. It will also form an active hemolysin when combined with an amboceptor specific for the red blood corpuscles. So much we have already threshed out. Also, we have assumed that quinine destroys the malarial organism only after it has come in contact with some blood element. Let us recall here that the amboceptor consists of two groups, the complementophile, which is always the same and which always combines with the complement, and the cytophile, which is made to measure so as to fit the cell which the body intends to destroy. Now, what is more probable than that the complex quinine molecule furnishes the approximate principle in more or less concentrated form from which the complementophile group of the amboceptor is made, this complementophile group combining with the cytophile group to form the full-fledged amboceptor, whether the cytophile group be in its original state when it has an affinity for only the malarial parasite, or in its altered pathological state when its affinity is equal for parasites and erythrocytes? If this is true, when the amboceptor is in its normal state we would expect, on the administration of quinine, to have furnished the one thing necessary to form an amboceptor specific for parasites, that the amboceptor thus formed would unite the poisonous complement with the parasites and the parasites be quickly killed out. If the cytophile of the amboceptor is in its altered state resultant upon the immunity acquired against the original cytophile group by the parasites, we would expect, on the administration of quinine, disintegration of the parasites plus disintegration of the red cells and ensuing hemoglobinuria. And this is exactly what happens in actual practice. If quinine be given to an individual suffering from a recent invasion of malaria, or one in which the parasites have not had either time to develop an immunity, or the stimulus of a high vital resistance, a disintegration of only the parasites occurs. If quinine be given to a case in which the parasites have been present for a longer period and in which the resistance of the individual has been high enough to stimulate the parasites to the acquisition of the immunity against the human serum, and especially when hemoglobinuria has already started spontaneously, we get a disintegration of the parasites plus a hemolysis, beginning or aggravated, as the case may be. Deaderick, in summing up, states that he does not believe there has ever been a case of hemoglobinuric fever without previous malarial outbreaks and in my small experience the history in nearly all cases shows a series of paroxysms some weeks before followed by an interval of rest in which there have been no paroxysms during which the patient has felt fairly well and been congratulating himself on the spontaneous disappearance of the disease, and this period of rest followed by the hemoglobinuric attack, the hemoglobinuria often being the first warning of serious trouble with no prodromata more severe than a little malaise or headache. It is during the interval of rest from the simple attacks that the parasites have been taking on their immunity, elaborating

a substance to combine with the human specific amboceptor, and the parasite and the red cell becoming more and more alike so far as an amboceptor to join them to the poisonous complement is concerned.

"And now," you ask, "what is the bearing of all this on the role of quinine in hemoglobinuric fever?" Clinical experience aside, the use or non-use of the drug, as pointed out by the foregoing hypothesis, co-incides almost identically, as I will attempt to show, with the ensemble of the opinions of various practitioners as derived from clinical observation. Given a case of hemoglobinuric fever. With the hypothesis in mind, we know that the substances in the blood which usually serve to get rid of the invading organisms have failed miserably in this instance. The amboceptor part of the parasitolysin has changed in character so that it is no longer specific for only the malarial parasite, but is also specific for the red blood corpuscles. The free receptor which the body has been making so long in order to defend its cell protoplasm from the malarial toxin probably needs only a slight chemical change in order to become the cytophile group of the amboceptor and these receptors are plentiful. Also, this cytophile group of the amboceptor, in its altered condition, combines also with the protoplasm of the red cells. The only thing now needed to produce an overwhelming quantity of this amboceptor in the blood is to furnish an approximate principle from which the complementophile group of the amboceptor can be easily elaborated, and such an approximate principle we have in quinine. The altered amboceptor is already working, destroying both parasites and erythrocytes. The destruction of parasites is apparent on examination of the blood and the destruction of erythrocytes even more so on a glance at the urine. The question is, do we want to give quinine and thoroughly activate the altered amboceptor, give the complement full swing and have a still more widespread parasitolysis and hemolysis, or would it be better to let the destruction of parasites and red cells go on at a more leisurely gait so as to give the blood-making organs a little more time in which to replace the destroyed blood cells? If we withhold the drug and give the blood more time to recuperate, we also give the parasites more time to recuperate. If we give the quinine, we cause an exceedingly rapid and almost total annihilation of parasites but weaken our patient, possibly beyond his power of endurance, by the sudden depletion of red cells, by the sudden liberation in his system of an enormous quantity of malarial toxin which has heretofore been safely encapsulated in the red cells, and by superadding the toxic effect of an enormous quantity of broken down red cells and their hemoglobin. There is little room for doubt, both theoretically and clinically, that quinine does cause an enormous increase in the hemolysis and the resultant hemoglobinuria, an increase in the icterus and in the general toxemia. However, if the patient has a good vital resistance and his blood-making organs are up to the job, he can take quinine and get well, recovery taking place more rapidly than where quinine is withheld. On the other hand, if his blood-making organs have been too far over-taxed already or, from any cause, are not equal to the strain of supplying the overwhelming demand, or the vital resistance not quite sufficient to stand the temporary but overpowering flood of toxemia arising from dead parasites and broken down blood, the administration of so much as one grain of quinine will undoubtedly cause his death. I have heard the opinion expressed that it is always best to give a little quinine at first and watch results before putting the patient on decided doses. This, I think, should be discouraged, because the degree of hemoglobinuria bears no relation whatever to the amount of quinine given, as is set forth in the writings of many able observers. I, myself, have seen a two-grain dose given hypodermically after the hemoglobinuria had practically cleared up, bring about the most frightful so called "hemorrhage" that I have ever seen. An intense jaundice immediately began to develop and death resulted within thirty-six hours from exhaustion or toxemia, I was never able to decide which, the two were so intimately associated.

If quinine can be given from the very first, before the blood-making centres have become partially exhausted and before the patient's vital resistance is worn out by prolonged toxemia, and if the patient is strong enough to live through the crisis which is absolutely certain to follow its administration, quinine can be given with probably a more rapid recovery following than if it be withheld. But if the patient is seen for the first time at all late in the attack, or his vitality wasted by chronic malaria, cachexia or other disease, the chances are against his living through the "quinine crisis," as it is convenient to call it. If the patient is seen for the first time on the day after the attack, quinine is out of the question, because hemoglobinuric fever itself is not amenable to quinine, as Deaderick plainly states. To begin with, the patient does not need it, because the greater portion of the parasites have been destroyed anyway, and quinine has no effect on the toxins from which the patient is now suffering, and only

adds to the load on the excretory organs which are already overworked; but the fact that there are no parasites to destroy will in no wise detract from the harmful effect of the drug on the red cells for, we must remember, when we give quinine in this condition we supply the one thing necessary to form a substance which is just as toxic to erythrocytes as it is to parasites. As I have before remarked, Mannaberg's series of examinations shows that on the day after the attack the parasites were present in the blood in only 17.1% of cases, while on the day of the attack and the day before the attack they were present in 63% and 95.6% respectively. After the day of the attack the parasites are mostly destroyed anyway, and about the only thing the quinine can do is to cause hemolysis of what blood the poor fellow has left, and put him to the trouble of excreting it at a time when he can hardly excrete enough malarial poison to keep himself alive.

The chills or "rigors" occurring during the attack are not the result of sporulation of the parasites, as has been supposed, but may be regarded as having their origin in the mingled toxic products of the broken down parasites and red cells. These rigors have no periodicity and are liable to come on at any time following a chilling or exertion of any kind, or from anything which temporarily lowers the resistance of the patient. They are almost invariably followed by an increase of the hemoglobinuria and general aggravation of the symptoms, but this can hardly be regarded as the effect of the rigor. They are, of course, to be guarded against and are combated by external heat, quiet, induced by an opiate if necessary, and the use of a bed-pan. Rapid elimination, where possible, is, of course, the best method of preventing these rigors.

That quinine should be given in large doses or not at all is, I believe, the consensus of opinion, and this certainly works in with the hypothesis which I have attempted to present. I may add that it should be given early or not at all, and this seems to me to be even more important. When it is given, every effort should be made to prepare the patient for and tide him over the crisis which is bound to follow, and if he can live through this, he stands a better chance of complete and rapid recovery than the patient who has had no quinine. The cases for quinine treatment should be very carefully selected and the question carefully considered whether their resistance, or what is left of it, is strong enough to stand the quinine crisis. To weak or debilitated patients or to those who are seen late, quinine is only a weapon with which to cut their own throats, or such is my opinion, and I am not alone in the belief.

By far the best method of treatment is eliminative. If we will remove the poisonous products of the struggle by means of diuresis, purgation and diaphoresis, of importance in the order named, Nature will destroy the invaders and leave the patient enough blood elements to meet his immediate needs and preserve life in a good per cent. of cases. The by-word of the older practitioners, "keep his kidneys going and he will live," holds just as good today as it ever has, and in nearly all cases where the urinary flow can be sufficiently maintained a recovery can be at least looked for. Of course, this is not meant to refer to intercurrent conditions and complications to which the hemoglobinuric fever patient and convalescent is exceedingly prone. It was only a few weeks ago that I discharged a case who made a good recovery from the hemoglobinuric attack, but who I thought would die from a complicating tonsillitis which persisted long after all symptoms of the fever had subsided. The pain on swallowing was so severe as to set up nausea on taking food and it became necessary for a time to feed him per rectum about two weeks after the fever had disappeared, the skin cleared off and the condition of the urine returned to normal.

In conclusion let me say that, with the exception of those things which I have seen myself or have quoted from authors, I do not mean to present what I have read as a proven fact. It can hardly be called a theory, because no steps have been taken to prove its truth. I only offer it to you as the explanation of the peculiar phenomena connected with hemoglobinuric fever which seems most probable to me, and I would like you to bear it in mind while treating your cases of hemoglobinuric fever and take it for what it is worth. Any observation that anyone may make of the disease which goes to either prove or disprove it will be received with thanks. The cause of the hemoglobinuria and its relation to quinine, the subject of so much confusion and dispute, ought to be cleared up if possible, and it is just as much up to us here in the South to get at its solution as it is to those in other places. The hypothesis which I have tried to state, while it may not be the correct one itself, may, at least, serve as a working basis upon which observations and experiments can be built up, and if it should be of any service in arriving at the correct conclusion I shall feel amply repaid.

Report of a Case of Bronchoscopy for Multiple Foreign Bodies (Almond Shell and Pulp) in a Child Two Years of Age, with Some Observations Upon Bronchoscopy in Infants and Young Children.*

John R. Winslow, B.A., M.D., Clinical Professor of Nose and Throat Diseases in the University of Maryland.

On January 5th, 1911, at 2 p. m., in accordance with a telegraphic appointment, I met Dr. F. G. Wright, of Chambersburg, Pa., at the University Hospital in consultation upon the case whose history follows:

Iona B—, aged 2 years, was playing upon the floor two days previously, when her mother's attention was attracted by her crying, and she noticed that the child was blue in the face and breathing badly. She immediately held the child up by the feet, slapped her back and running her finger down the throat removed a large amount of almond shell and pulp; this resulted in greatly improved respiration and the mother supposed that the nut had all been removed. Since this time, however, the child has at times exhibited embarassed respiration and occasionally cyanosis.

Examination.—Respiratory movements much shallower on left side and respiratory sounds lost below the 2nd rib, no rales present, temperature 98 2-5, pulse 118, respiration 28. Slight supra-clavicular retraction on left. Right lung normal.

The patient was admitted to the University Hospital and the larynx examined under cocain with the direct Jackson's speculum. Nothing was seen in the glottic nor subglottic space, and realizing the impossibility of passing a bronchoscope through a larynx of such size without undue force, tracheotomy was determined upon.

Meanwhile a radiograph was obtained which, as was to be expected from the nature of the object (nut), revealed no foreign body, but only enlarged peribronchial glands.

On January 6th, 1911, at 3 p. m., I performed a low tracheotomy, assisted by Dr. F. G. Wright, under chloroform anesthesia.

Immediately subsequently, with Dr. H. C. Davis in charge of the patient's head and the bronchoscopes, I passed a 7 m.m. Jackson's tube into the left lower lobe bronchus, which was systematically examined; the tube was, however, too large to enter the upper lobe bronchus. A considerable amount of milky pulp was found in the bronchus and removed with mops; no shell could be discovered.

I had expected to employ suction with Killian's aspirator in the hope of aspirating the material from the smaller bronchi, but the patient became cyanotic, the pulse weak, and oxygen and amyl nitrite had to be administered.

The bronchoscopic examination was of necessity discontinued, having occupied about 30 minutes.

The tracheotomy wound was left open, long sutures were inserted in its lips, and the nurse instructed to pull the wound open should the patient cough.

The following day (January 7th) the temperature shot up to 103.4° F., respiration 140. Embarassed respiration diminished resonance with loss of inspiratory and expiratory murmur below the 2nd rib were present on left side; tubular breathing was heard at left apex.

Subsequently marked cough with expectoration developed. In short, the patient manifested well marked pneumonia.

At this period Dr. C. W. McElfresh was called in consultation and placed in charge of the medical treatment of the case.

From the 9th to the 15th the patient went through the varying phases of a typical pneumonia.

On January 13th the tracheotomy tube, which had been inserted the day following the operation, was permanently removed and the patient was able to breathe through the mouth readily.

On January 17th, the 13th day, the patient was discharged from the Hospital to return home; temperature 97.3°, pulse 110, respiration 24. Tracheotomy wound nearly closed, general condition much improved. The subsequent history of the case is derived from two letters sent by Dr. Wright. The first, dated February 16th, 1911, reports:

Dear Doctor:—

The child is still alive but very ill. When she first came home she was very well, except a running ear and a solid patch a little larger than a silver dollar in the left apex. It seemed as though the trouble would subside and the foreign body become encapsulated but she developed an influenza (every one here has it) and after a week of coughing developed a pneumonia involving at least the whole of the upper left lobe. After having the pneumonia one week the scar in the trachea opened spontaneously and I opened the skin allowing a free discharge. The next day she coughed up an oval piece of almond kernel about 6x3 m.m. That is 4 or 5 days ago and she is slightly improving. If she gets well will send full data.

WRIGHT.

An extract from the second letter, dated

*Abstract from paper presented to the American Laryngological Association at its annual meeting at Atlantic City, N. J., May, 1912.

February 29, 1912, gives the final outcome of the case.

Dr. John Winslow,
Dear Doctor:—

Today I examined Iona B—. Sorry we did not report earlier, but they had moved; have only lately located them. The child is apparently *perfectly well* with no signs to show where the trouble in the chest was.

The scar in the neck is rather broad but the trachea seems solid. After a slow convalescence she recovered fully.

Very truly yours,
FAIRFAX G. WRIGHT.

A more unfavorable case could scarcely be imagined than this one, presenting many difficulties.

1. The child's age (2 years) and under development

2. The nature of the foreign body, a pulpified nut, furnishing multiple particles which were spattered all over the lung surface, and doubtless entered every bronchiole.

3. The bronchus involved, the left, the most difficult to examine.

The pathologic condition in such a case is well illustrated in that reported by F. E. Hopkins (Trans. Am. Lar. Ass'n, 1911).

A female child 4 years of age inhaled a peanut; careful bronchoscopic examination at two sittings failed to reveal a foreign body and the child died on the second day.

"Autopsy showed many (24) small fragments of nuts scattered throughout the lungs and around each a pneumonic area.

Instead of a single nut occluding the trachea or larger bronchi, the many fragments of the well chewed nut were shot into the smaller bronchi."

Cases of foreign bodies in the lungs of young children and infants constitute the most difficult in the whole field of bronchoscopy, both on account of the small size of the respiratory passages at this period of life and the difficulties of instrumental manipulation, as well as the nature of the objects usually encountered.

While a young child is liable to place almost anything in the mouth and inhale it, owing to the small size of the glottis (7 m.m. 3 years, Killian; 6 m.m. infants, Jackson) large objects cannot pass through into the lower passages; therefore, many of the foreign bodies commonest in adults are rarely found in the lungs of very young children (pieces of bone), while those encountered belong to the class most difficult of removal, small or multiple objects (nut shells, pulp, beads, pins, beans, pebbles, etc.). The younger the child the greater the difficulty and urgency, and the mortality is high despite successful removal.

What is our best course of procedure in this class of case? Should we tracheotomize at once as the primary procedure, or has the advent of bronchoscopy largely abolished the necessity for this operation?

The desirability of upper bronchoscopy (without tracheotomy) is obvious, and it should be the routine method were there no disadvantages associated with it.

In these young children, however, upper bronchoscopy has serious objections attached to it; the anatomical structures are small rendering the manipulation of instruments difficult and resulting in loss of time and irritation of tissues.

A study of the cases reported shows that while upper bronchoscopy has been frequently attempted for the removal of foreign bodies in infants, in a large percentage if not the majority of the cases tracheotomy has become ultimately necessary for successful removal.

Now if such is the situation, why not tracheotomize at once and operate by the easier and more certain route (lower bronchoscopy)?

In a recent article (Deutsch. Med. Wochenschrift, June 29th, 1911), G. Killian has made a most valuable contribution in which he calls attention to another aspect of this subject, namely, the frequency with which tracheotomy or intubation becomes necessary after upper bronchoscopy, *even when successful*, reporting a series of 19 cases under 7 years of age, some of them personal and some derived from literature; he also cites a series of 35 cases reported by Schneider, of Moscow, of which 5 required intubation or tracheotomy.

We know from both clinical experience and post-mortem evidence that inflammatory swellings are prone to occur in the subglottic space. Children from the 7th, and especially from the 4th year, downwards, are especially liable to such swellings after upper bronchoscopy.

So that it seems to me that the present situation with regard to foreign bodies in the lungs of infants and very young children, has been well summarized in the advice of Hubbard (Trans. Am. Laryng. Ass'n., 1911) "when in doubt do tracheotomy."

Clinical Experience with Phylacogens.

By S. Pirosh, M.D., Baltimore, Md.

The Phylacogens, intended for the treatment of various infectious conditions, are based on the fact that every disease is a complicated process. The normal human body is the natural habitat of scores of different micro-organisms, many of which are pathologic when the opportunity offers.

For that reason it is difficult to believe that one kind of organism, aroused to activity, should produce a disease while the myriads of other organisms always present, at the same time remain quiescent. Such is in all probability not the case. Tissues attacked by any bacterium offer a fertile field for the growth of others, thereby making every disease one of compound origin. This state of affairs makes the use of Phylacogens entirely logical, as they are especially designed to combat complicating infections as well as the one which gives the disease under treatment its name.

Mixed Infection Phylacogen is a combination of products resulting from the growth of many varieties of organism. It differs from a vaccine, as ordinarily understood, in that it is entirely free from germbodies. Practically all the bacteria met with in daily medical practice are grown on the proper media, each variety being present in several different strains, and the metabolic substances derived from these various growths are mixed. Standardization is done in the usual manner, that is by an estimated count of the germ-bodies, these afterwards being removed by filtration through unglazed porcelain.

Mixed Infection Phylacogen, in addition to being an entity that is of value in many infections in which a single type of bacterium is not predominant, is also used as a base for other specific Phylacogens such as Gonorrhea Phylacogen and Rheumatism Phylacogen.

These latter are made by adding an equivalent amount of the metabolic products resulting from the growth of the gonococcus and the streptococcus rheumaticus respectively. They are therefore polyvalent in every sense of the word.

In reporting a half-dozen cases, while the results are scarcely decisive, yet only by such reports can we arrive at definite conclusions regarding the efficacy of the Phylacogens in treatment.

Case No. 1.—Diagnosis: Gonorrheal orchitis and epididymitis. The patient, G. F., aged 21 years, unmatried, had gonorrhea two months previously, which terminated rapidly under hospital treatment. Three weeks before I was called the testis and epididymus became rapidly swollen, much pain accompanying the enlargement. The patient was sent to the hospital, but for one week experienced no relief under the usual treatment. Later he was at home under a physician's care for another two weeks, but became gradually worse, suffering greater pain, while the swelling became enormous.

I first saw him on the 30th of August, and prescribed linseed and tobacco poultice with no relief. On the 31st of the month I injected 5 Cc. of Gonorrhea Phylacogen with prompt relief of pain. The Phylacogen was repeated on the five succeeding days (six doses in all of 5 Cc. each) with absolute disappearance of pain after the first injection, abatement of inflammation and swelling after the third dose. On the 6th of September the patient was discharged entirely well.

Case No. 2.—Diagnosis: Pueperal infection. The patient, B. R., married, four children. Infection set in on August 28th with a temperature of 104° F. and great prostration. Ordinary methods were exhausted with no relief. On the 31st of August, 4 Cc. Mixed Infection Phylacogen were injected, followed by a chill. September 1st the injection of 4 Cc. of the Phylacogen was repeated with prompt abatement of the fever and gradual, uneventful recovery.

Case No. 3.—Diagnosis: Hay fever. The patient, M. J., 33 years old, bookkeeper, had a history of hay fever lasting for three years. There was an irritating discharge from the nose and eyes, with no fever; but insomnia and dyspnoea were present. The patient was pale and emaciated. August 20th 2 Cc. Mixed Infection Phylacogen were injected, followed by a severe local and systemic reaction, with chill, fever and sweat, headache, malaise and anorexia.

August 21st, 4 Cc. of Mixed Infection Phylacogen were injected with severe reaction following. On August 22nd, an additional 10 Cc. were administered. The hay fever improved somewhat; but the patient at this juncture was forced to leave the city. He wrote me on the 15th of September that the hay fever symptoms had disappeared except on extremely hot days, when they bother him a little, but are promptly relieved by Adrenalin sprays.

Case No. 4.—Diagnosis: Rheumatism. H. T., age 19 years, single. The patient, a young woman, was very robust in health until two years ago, when she contracted rheumatism and lost forty pounds in two years. The knees and other joints of the lower extremities and the wrists, fingers, and elbows were swollen and very painful. The patient had been treated in hospitals on and off for three months with very slight relief, while the salicylates had been found useless. On the 30th of August, 5 Cc. of Rheumatism Phylacogen were injected with relief of the pain in the knees. Five Cc. of the Phylacogen were injected on the 1st, 2nd and 3rd of September, and 10 Cc. on the 5th and 6th with absolute relief. Four months after discontinuing the treatment the patient was well and had gained twenty-one pounds.

Case No. 5.—The patient, R. M. S., aged 29, married, a piano repairer, suffered from hay fever complicated by nasal catarrh, sneezing, insomnia, profuse nasal and ocular discharge, which was burning in character. I injected Mixed Infection Phylacogen as follows:

Aug.	19th,	2 Cc.	Reaction marked.
	21st,	2 Cc.	Reaction marked.
	23rd,	10 Cc.	Reaction weak.
	26th,	10 Cc.	Reaction weak.
	30th,	12 Cc.	Reaction weak.
Sept.	1st,	20 Cc.	Reaction marked.
	3rd,	10 Cc.	Reaction marked.
	5th,	10 Cc.	Reaction marked.
	7th,	10 Cc.	Reaction weak.
	9th,	15 Cc.	Reaction none.

The Phylacogen was discontinued as, after slight relief at first, the hay fever reappeared. Adrenalin solution in the eyes and nose brought prompt relief. Sept. 15. Operated on and one enlarged inferior turbinated bone removed. Hay fever not relieved. Injected Phylacogen 5 Cc. on 21st and 26th of September. Prompt abatement of symptoms.

Case No. 6.—The patient, F. S., 25 years of age, had asthma of 10 years duration, the onset always occurring in the spring, continuing during the summer months and disappearing with the advent of cold weather. On August 23rd, 4 Cc. of Mixed Infection Phylacogen were injected with no reaction following. August 26th, 8 Cc. were given, followed by 10 Cc. every other day thereafter for six doses, with moderate reactions and gradual improvement. After the withdrawal of the injections the symptoms became aggravated. On the 17th, 21st, and 23rd of September, I again injected 10 Cc. with no change, after which the phylacogen was discontinued. I shall keep the patient under observation.

There are some points in connection with the foregoing that are worthy of special attention. In case 1, the treatment ordinarily given in gonorrheal orchitis and epididymitis failed utterly to benefit, while the injection of Gonorrhea Phylacogen produced results from the first. It is indeed worthy of note that the pain disappeared after the first injection, while the other symptoms abated after the third. The great size to which the involved organs were swollen and the unusually rapid response of the patient to the Phylacogen marks the case as unusual.

Case 4, which was one of articular rheumatism, likewise gave prompt response when treated with Rheumatism Phylacogen, and was definitely and satisfactorily cured, as evidenced by the patient's relief from symptoms and rapid gain in weight. The administration of the usual remedies had been practically a failure in this woman's case.

Case 2, puerperal infection responded well to the Mixed Infection Phylacogen, showing thereby that the patient's ability to form protective substances in the blood was little, if any, impaired despite her great prostration. Beneficial results were secured here as in the preceding, after the ordinary methods had failed utterly.

The cases of hay fever and asthma in which I used the Mixed Infection Phylacogen were for one reason or another not successful. To my mind, this is scarcely to be considered a mater of surprise, as these diseases are notorious for resisting any and all methods of treatment. The etiology of both diseases, as generally accepted, admits of a neurotic element, in the absence of which, we are told, they cannot exist. In addition to this systemic defect there exists the local disturbance which we can readily conceive to be circulatory, complicated by an infection. This infection can be benefited by Phylacogen probably in most cases, and those cases in which the predominant factor is an infection, while the neurotic factor is purely secondary, can in all likelihood be greatly aided or entirely cured by means of Mixed Infection Phylacogen. Great care should, therefore, be used in the choice of cases.

On the other hand, it is reasonable to suppose that when a case fails to yield to Phylacogen the reason is that the neurotic element is the important one, and the one which is in the ascendant. Incidentally it might be mentioned here that as the number of patients treated by means of one or another of the Phylacogens becomes greater, the indications are that we shall be compelled to revise the supposed etiology of some of the more obscure affections, to which class hay fever and asthma belong, which are at present resisting the best efforts of the medical profession.

Judging from my experience with Phylacogens these valuable products seem entirely worthy of further clinical trial, with the expectation of a greater percentage of recoveries than we can secure from the usual methods. As before mentioned care should be used in the choice of suitable cases for Phylacogen treatment.

1510 Fort Ave.

Ligation of the Jugular Veins of Guinea Pigs.

By F. D. Austin, M.D., Charlotte, N. C.

I will say in the beginning of my discourse on vein surgery on the guinea pig that I was prompted to try this because of the scarcety of the pigs.

In doing the Wassermann blood test it of

course requires the blood serum of the guinea pig as complement to make the test. This complement will not remain active longer than 48 hours as a rule. A full grown guinea pig will give you from 15 to 20 c.c. of blood if bled to death, and you can collect from this fully two fifths by volume pure blood serum. As we use only a 40% dilution in normal salt solution for complement you can readily see that if we get, say 5 c.c. of serum from the blood and dilute it properly we will have 12.5 c.c. of the 40% dilution. Now, as we use only .1 c.c. of this dilution to each test and control we would have enough complement to do 62 Wassermann reactions which is much more than any one will do in the limited life of the complement.

Now, my object for ligating the jugulars is that I can save 100% of the lives of the guinea pigs by ligating one jugular at the time and doing both within a period of one month, and lastly cutting the carotids and bleeding them to death. By this procedure I use each pig at least three times.

Technique of the Operation.—Cleanse the side of the neck to be cut by applying pure Liq. Cresolis Comp., and with sharp scissors cut the skin cross-wise the neck for 2.5 cm, then by blunt dissection feel your way down to the jugular which will stand out very prominent when you are holding the pig around the chest and neck with the nose pointing downward at an angle of 45 degrees. The pig, of course, is to be held by an assistant. When you have cleared the vein horizontally for 2.5 cm. simply cut it one-half the way across. The reason for not entirely severing the vein is to keep it from retracting into the deep tissues of the neck so you can't ligate it. Hold the pig and collect the blood in a sterile Pitri dish until you have collected 8 or 10 c.c. After you have collected the blood clamp the vein on either side of the incision and ligate it with very small catgut and close the skin wound with three sutures of catgut or silk. Sponge it well with Liq. Cresolis Comp. and put the pig in a warm quiet place for 10 to 12 hours and return him to the pen.

I have done this operation numbers of times and a pig with both jugulars ligated is just as strong and active as one who has never had the operation. I have one large male pig whose jugulars I ligated in February and April, 1912. He appeared more vicious among other male pigs after the operation than before. I received a shipment of a half-dozen large male pigs in the early fall of last year and put them in a separate pen within the large pen that contained the other pigs. This male scratched a hole under the side of their pen and went in and declared himself "King." There was such a racket in the pen that I thought that a cat was after them, but upon inspection I found this fellow knocking the six pigs in all directions; in fact he had them bloody all over.

For this he has received the pugilistic title of "Jack Johnson" or "King" of the pen. He still defends his title.

The Right Kidney—A Disquieting Factor in the Diagnosis of Acute Intra-Abdominal Conditions.*

By W. L. Peple, M.D., Richmond, Va.

If the thumb of the right hand is laid along the lower right costal margin with the tip of the little finger resting on the anterior superior iliac spine, the palm and extended fingers will cover the Balkans of Surgery, a hotbed of disaffection and rebellion, a veritable zone of discontent.

Here lie the four allies, the gallbladder, kidney, appendix and fallopian tube. It is not my purpose to attempt to fix individual responsibility for acts of each or all, for all, save one, are open to frontal attack and a clever blow, well timed and skilfully delivered, may well strike three, but the fourth must be taken in the rear, and is far oftener more vulnerable to diplomacy than to open war. In other words, it is not my intent to enter into a discussion of the differential diagnosis of the diseases of these four organs, but to call attention to certain disorders of the kidney which simulate at times so closely diseases of the other three.

This is especially important because abdominal incision, even if made over the wrong organ, will do little harm and guide us to the right one. But an abdominal incision will not aid us in operating upon a kidney or ureter in need of surgery; and an unnecessary traumatism and a general anesthetic can only make worse a purely medical disease of the kidney.

I do not wish to minimize the importance of a careful differential diagnosis of the diseases of the right abdomen, but wish to impress the greater importance of fixing the responsibility upon the kidney when it is at fault, and of eliminating it as a factor when innocent.

Acute Unilateral Nephritis.—The term "nephritis" is so inseparably linked with the name of Bright that when we hear it we instinctively picture it either as a local expression of a systemic disorder or the accompaniment of one of the acute, infectious diseases.

The term "pyelitis" carries with it the old textbook picture of chills, sweats, high

*Read before the Richmond Academy of Medicine and Surgery, January 14, 1913.

fevers, pain in the back, and urine loaded with visible pus—a terminal condition bearing about the same relation to early infection as does general peritonitis to the intact appendix with an inflamed mucosa.

The picture of a blood-borne infection affecting but one kidney is to some of us novel, if not quite unique. Ordinarily, the surgeon does not see acute, abdominal infections early. When he does, time enough has usually elapsed for definite symptoms to have emerged from the chaos overshadowed by pain, and his task is made much easier.

Given a case of severe, right-sided abdominal pain with elevation of temperature, acceleration of pulse, vomiting and local tenderness, what should be our method of procedure? First, elimination of the tubes by careful vaginal examination. This should be a routine measure and it is one far too frequently neglected. If there is one point upon which surgical opinion has crystallized, it is the non-operative treatment of acute tubal infections The next step is the elimination of the kidney, and this, to my mind, is one of the most difficult and disquieting procedures in surgical diagnosis.

If there is a second point on which surgeons have agreed it is the early operative treatment of acute infections of the appendix. The differential diagnosis is of paramount importance. If the case is one of acute, unilateral nephritis or pyelitis, there is not only no need for appendectomy, but the traumatism and the anesthetic will do the inflamed kidney positive harm.

As I have seen practically nothing written on this interesting condition, I must give the symptoms as I have observed them at the bedside, hoping that in the discussion, the experience of others will add definiteness to a rather meager picture.

The pain is intense and of a violent, boring character. It is far more prone to exacerbations and remissions than pain from the appendix. It seldom, if ever, begins as a general abdominal pain, but starts over the appendix. It is, has been, or at some time will be, over the kidney region in the back, though not so severe as anteriorly. The point of greatest tenderness anteriorly has been below and internal to McBurney's point. Why, I do not know. Tenderness can almost always be elicited over the kidney also by pressure from behind or on bimanual palpation of the organ. The facial expression has nothing characteristic and is never anxious. I have not observed muscular rigidity or tympany. The temperature is a variable quantity, being very high in some cases and but slightly elevated in others. The pulse keeps pace with the temperature, and has nothing characteristic about it.

The crucial test is the microscopic examination of the urine. To avoid possible sources of error, I would emphasize the necessity of excluding gonorrhea in the male by inspection as well as questioning, and by the invariable use of the catheter in the female; for an uncatheterized specimen in the female is worse than valueless—it may be positively misleading. Furthermore, the examination should be made by one skilled in this kind of work.

Urinary Findings.—In the early stage, there will be found a few red blood cell sa, few leucocytes, blood casts, fibrin casts, and epithelium from the kidney tubules. The blood and blood casts vary in wide limits according to the severity of the case. As time passes, the blood diminishes and the pus cells increase in number. When the pelvis of the kidney is most affected, the blood casts are absent and pus cells more abundant.

The following case histories will illustrate the condition described:

Case I.—Male; single; white; age 38; no history of a previous similar attack. Following a rather free partaking of alcoholics he was seized with violent, right abdominal pain, high temperature, rapid pulse, and vomiting. He was seen about six hours after the attack began. There was marked tenderness a little below and internal to McBurney's point, but no rigidity. The pain had also been in the kidney region behind. Bimanual pressure over the kidney revealed a very tender organ.

Diagnosis.—Acute, right, unilateral nephritis. Having observed similar cases, I predicted the urinary findings for three days, and was not a little pleased to have them subsequently verified; 1st day.—A few blood cells, red and white; a few blood casts and kidney epithelium. 2nd day.—Less blood and more pus cells. 3rd day.—A much freer showing of pus.

Case II.—Female; white; married; age 20; menses normal; never pregnant. She came with a diagnosis of acute appendicitis. One year before she had an attack of pain over the ureters, more on the left than on the right side, accompanied by bloody urine lasting several days; then followed an interval of several months without further trouble. She then suffered with pain in the back and over the ureters, and was on and off the bed for about five weeks with paroxysmal pains at intervals of several days. At times, there was blood in the urine as small clots, but it was not cloudy. She now developed chills which were without any regular periodicity. These gradually disappeared and she was up and about

again. While walking from a neighbor's, she was seized with sudden pain over the appendix so severe that she reached home with difficulty. The pain continuing, she was brought to the hospital, the diagnosis being acute appendicitis. The temperature was normal, the pulse rapid, and there was no rigidity or distension. Marked tenderness a little below and internal to McBurney's point and to a less degree over the kidney front and rear, was present. Vaginal examination was negative. Urinalysis showed a small amount of blood and pus, renal epithelium and blood casts.

Diagnosis.—Diffuse nephritis and pyelitis. In a few days, there was a flocculent cloud of pus in the urine. The temperature varied from 100 to 103 degrees. The pain continued paroxysmally; the tenderness over the appendix persisted, but subsided with the rest of the symptoms. A radiograph was now taken and proved negative. The appendix, which was slightly, if at all, diseased, was then removed.

Case III.—White male, single, aged 24, gave rather a unique history in that his appendix, chronically inflamed and badly adherent, had been removed several years previously. After six weeks confinement to bed because of a fractured thigh, while convalescent he was seized with violent pain in the right abdomen. The pain was rather high, and as the appendix had been removed, the case was diagnosed as acute cholecystitis. Microscopic examination showed a large number of blood- and fibrin-casts, which fixed the responsibility on the kidney.

Case IV.—White female, single, stenographer, aged 22, gave a history of several attacks slight in character and short in duration. The present attack was far more severe than any other. The pain was very severe and paroxysmal, beginning in the lumbar region and localizing over the appendix. Rigidity and tympany were absent. There was tenderness over the appendix as well as in the lumbar region.

Diagnosis.—Acute, unilateral nephritis, confirmed by microscopic examination. The patient states that in the past four years she has had several attacks which have yielded readily to urinary antiseptics.

Case V.—White female, single, aged 22, gave a history of ovarian neuralgia two years before the present trouble. A temperature of 100 degrees was preceded by three days of pain over the appendix. The diagnosis of appendicitis was made; and I was called in to operate when all preparations had been made. Hasty examination revealed a very tender spot over the appendix. A normal appendix was removed. The temperature and pain persisted; and a few days later the urine showed a heavy, flocculent cloud of pus. She had a protracted convalescence, but made a good recovery. This was, to my mind, a case of pyelitis from the first, that a more painstaking examination would have revealed.

Case VI.—Colored male, aged 45, farmer, was suddenly seized with violent pain in the right lumbar region, radiating anteriorly. On palpation, the kidney was found to be quite tender, front and rear. A tentative diagnosis of stone was made. Urinalysis showed a few leucocytes and blood cells; radiograph was negative.

Diagnosis.—Acute, right, unilateral nephritis. Under urinary antiseptics, recovery was rapid.

Stone in the Kidney and Ureter.—If one doubts the confusion of the symptoms of stone with those of appendicitis, let him look over a series of cases of stone and see what a goodly percentage of them have scars over McBurney's point. We have all had the experience of opening the abdomen and finding an appendix the pathology of which would in no way warrant the severity of symptoms presented. I believe that a careful subsequent analysis of the urine and a radiograph taken by a competent operator will do more to aid us in arriving at a correct solution of the trouble than a second operation and a search for adhesions or a kink of Lane.

The symptoms of stone in the right kidney or ureter are, briefly, sudden, usually violent, pain, never starting as a general abdominal pain, but beginning in the lumbar region and radiating to the appendicular region, or vice versa. I have rarely observed the reflex pain in the head of the penis, so frequently noted in print. Fever is not a usual accompaniment. The whole general picture is one less of surgical urgency than an intra-abdominal inflammation.

Careful microscopic examination of the urine will almost invariably show blood and epithelium from the kidney, pelvis or ureter; and indicates the need of a confirmatory radiograph. I am indebted to two of my colleagues for invaluable assistance in the foregoing and following cases: Dr. E. Guy Hopkins, for the pathologic; and Dr. A. L. Gray for the radiographic findings. It has been a matter of intense interest to watch the work of these two men. Almost invariably they have checked one another, not only as to the presence of stone, but as to its anatomical location as well.

The following case will illustrate the confusion of symptoms and the value of careful routine examination.

Case I.—White female, aged 36, married, mother of three children; previous history

negative. About two years ago she had an attack of pain in her right side, not very severe. Since this time she has had numerous attacks, some slight, some severe and becoming more severe of late. The attacks seem to bear a definite relation to her menstrual periods, coming almost always with the beginning or termination of the menses and, of late, almost of monthly occurrence. The pain is very severe, beginning over the appendix and radiating down toward the right tube. At times it was also in the lumbar region. There was never a rise of temperature. The last attack occurred about ten days before coming to the hospital; and the diagnosis was recurrent appendicitis.

Vaginal examination revealed a badly lacerated cervix and perineum, and a retroverted uterus; the tubes and ovaries were normal. Microscopic examination revealed a few blood cells and quite a number of cells from the kidney pelvis.

Diagnosis.—Stone in the pelvis of the kidney. A radiographic examination was then made, the report from it being a stone the size of a cherry seed in the pelvis of the kidney.

Upon operation this was verified, and the stone removed through a small slit in the pelvis.

With the lacerated cervix, the retroverted uterus and the very definite relation between the menses and the attacks of pain; with the diagnosis of appendicitis, it would have been very easy to fall into error, do a section, suspend the uterus and remove the appendix. These procedures, however, would not have improved the symptoms from which she sought relief.

Case II.—White male, aged 32, clerk; gave a history of his first attack of pain about eight years previously. Up until the present year, he has had about twelve attacks. During the past year there have been fifteen attacks, which are increasing in frequency and severity. The pain is in the right side, above and to the inner side of McBurney's point. It never radiates down the thigh or into the head of the penis. It has never been lumbar in character. It is so severe that two H. M. C. tablets have failed to relieve him. There has never been any elevation of temperature. There has never been any tenderness anywhere; never any macroscopic blood in the urine. With two attacks, there was a decided icteric tinge to the skin. The location of the pain, coupled with jaundice, strongly suggested gallstones. Urinalysis showed blood- and kidney-epithelium. A radiograph revealed a stone in the kidney substance. On operation, a stone was removed from the corticomedullary junction.

This case also illustrates how the pain and other physical signs may mislead, and emphasized the value of routine effort to eliminate the kidney.

Before closing, I wish to call attention to two other peculiar conditions, which I have not seen described, which bear a close relation to one another and seem based on faulty metabolism. I call attention to them because they seem to me definite clinical entities with a similar if not an identical origin. The one is an accompaniment of marked oxaluria, the other of a marked acidosis usually associated with pregnancy. By reporting a typical case of each, I can best describe their symptomatology.

Case I.—A white female, aged 28, married, no children, while convalescent from an operation for a very bad case of pus tubes, in which both tubes and the appendix were removed and free drainage used, was seized with a violent, right-kidney colic which required repeated doses of morphine to relieve. After recovering, I lost sight of her for a year, when she returned with an almost constant pain in her right side, beginning in the back and running down to the appendicular region. In addition to the usual pain, there were frequent violent paroxysms.

The tubes and the appendix had been eliminated. Urinalysis showed blood cells and a very abundant deposit of oxalates. I felt confident that a radiograph would reveal stone. She was given an ounce of castor oil preliminary to taking the radiograph; and stated the next day that the oil had cured her. The plate was negative, and she was sure that no stone had passed. She has no attacks as long as the bowels are kept open and the oxalates held in solution by giving mineral acids. Constipation and faulty metabolism, as exhibited in the oxaluria, seem here a reasonable explanation of her condition. Why the pain should be unilateral I do not attempt to explain. Unfortunately, her interest in her case was of the purely practical kind, that stopped with the cessation of pain, so that I was unable to note the subsequent condition of the urine. I have seen a few other cases under this group, but none so typical.

Case II.—This illustrates the second group. A white female, aged 28, married, had suffered several attacks of appendicitis in past years. When about six months pregnant, she was taken with a severe pain over the appendix accompanied by persistent vomiting, elevation of temperature, rapid pulse, and exquisite tenderness over McBurney's point. Muscular rigidity, tympany and lumbar tenderness were absent. The condition had existed several days without improvement. Vaginal ex-

amination revealed a normally pregnant uterus. Urinalysis showed abundant acetone and diacetic acid; otherwise, there was nothing significant.

She was given one drachm of sodium bicarbonate by mouth every hour, and saline by rectum, following which the urine became alkaline and all symptoms grew better. She was then put on a starchy diet, and the acetone and diacetic acid quickly disappeared. The appendix was then removed. It bore evidence of former attacks, but its condition would hardly have warranted the rather severe symptoms occurring just prior to operation.

I have observed several cases with histories almost identical with this one, usually in pregnant women, but time will not permit a further recitation.

To summarize: There is in addition to the acute inflammation of the kidney substance and its pelvis and the symptoms due to the presence of stone, a definite group of symptoms closely resembling those of acute appendicitis. This condition seems to be due to faulty metabolism, evidenced, in the first instance, by oxaluria; and in the second, by urine loaded with acetone and diacetic acid.

Whether the pain is colonic or nephritic, I do not know. It certainly bears a close resemblance to the pain of appendicular or tubal inflammation. The absence of rigidity and tympany, and the primary local origin of the pain are the chief differential signs. Clearing the alimentary canal and the administration of a mineral acid, to hold the oxalates in solution, give relief in the one; while neutralization of the urine with alkalies and the administration of starchy foods correct the other.

In making a diagnosis of the second condition, one should exercise the greatest caution, for acidosis frequently accompanies intra abdominal inflammation; and both acetone and diacetic acid are often found in these cases, especially when food has been withheld for any length of time. On the other hand, recognition of a marked acidosis is always of the highest importance whether it be associated with a true surgical condition or be but a signal of a purely medical one, for the administration of a general anesthetic in either instance by exciting the elaboration of more toxic substances and crippling the organs of elimination, may easily tip the already lightly balanced scale and cause a fatal termination.

I realize fully that acute inflammations of the right abdomen and especially of the appendix, are matters for early decision and radical action, and that delay and temporizing may cost a life. There are cases so evident, so clear, so urgent, that physical findings alone may be sufficient when laboratory accessories are absent or inconvenient. But there are many, many other cases less urgent in which the question of life and death is not uppermost. In these, at least, let us make routine vaginal examinations to exclude the tubes, and careful microscopic examinations of the urine, and if this be suggestive, a radiograph of the kidney and ureter, and thus exclude that most disquieting factor, the right kidney.

1000 West Grace Street.

Lithopedion in the Abdomen 32 Years.*

By Jno. W. Dillard, M.D., Physician and Surgeon St. Andrews Hospital, Lynchburg, Va.

Mary Jones, a bright mulatto, age fifty and unmarried; no history of previous pregnancies and of healthy parentage. The patient was referred to me by her family physician last July, and was admitted to the hospital. An examination revealed a very greatly enlarged abdomen, and somewhat more enlarged on the right than left side. The patient, in addition to the enlarged abdomen, was suffering much from anasarca and some ascites. The most remarkable symptom pertaining to the abdomen was to be found in and around the umbilicus. For a space of two inches in diameter the tissues were black and insensitive, showing that from some internal pressure the circulation at this point had been interferred with and that gangrene was developing.

While the patient was in a poor condition for an operation, it was perfectly plain that it was the only thing left to be done. On opening the abdominal cavity a dense hard mass was found filling the whole abdomen. There were very few adhesions, and the tumor was rather easily removed. To the left of the tumor a small uterus was found with the left ovary, both in an atrophied condition. There were no other conditions connected with the operation that warrant special mention. The woman made a good recovery, and left the hospital at the end of three weeks.

The tumor upon examination was the shape and appearance of a large baby at full term, except there was lacking head and extremities, though rudimentary arms and legs could be seen. To examine this strange growth more carefully it was sawn longitudinally through, dividing it in lateral halves. It was dense and hard as bone; not only the outer portions but the petrifica-

*Read before the Norfolk meeting of the Tri-State Medical Association.

tion had extended entirely through. This Lithopedion weighed something more than eleven pounds, and is still preserved in the hospital.

This case was evidently an abdominal ectopic gestation, the impregnated ovum falling from the fimbriæ into the abdomen and there attaching itself. The placenta, which no doubt had been attached to the intestines, must slowly have been absorbed, as nothing could be recognized which might have been the remains of that organ; except in so far as the umbilical cord was concerned, that was ossified for about three inches from the umbilicus.

The history of this woman as told by herself and family goes to show that thirty-two years ago she missed her period, which was absent several months and then began to re-occur at irregular times for five or six months, then disappeared. During all this time she was growing large, and attracted the attention of her friends who constantly advised her to see a doctor, which she refused to do. At about what they took to be the 9th month of gestation she became very sick, suffered pain for quite a long time, but would not have a doctor called. The pains gradually wore off and she returned to her work, and has been able during all this long time to attend to most of the duties of housekeeping.

Charity Hospital and Medical School.

By Addison G. Brenizer, A. B., M.D., Charlotte, N. C.

Regarding the establishment of a Charity Hospital and its relation to the sick poor, I have but one idea of a scheme, which idea with me has become fixed. It is an old one, well tried out and continues even now to be accepted as the most practicable and efficacious and offering the greatest advantages to the primary factor of consideration, the sick poor. The scheme is: The establishment of one institution, combined Charity Hospital and Medical School; from the very beginning, the one not to be considered without the other.

I am saturated with my belief in this scheme, being myself a product of such an institution and having lived, after my university course, for eight years in such institutions, with the exception of one, and there by way of contrast, I realized the great disadvantages under which this hospital was run, simply because it was not an institution of this character.

So I have harbored this idea for a long time and am still maintaining it as the only means of obtaining the most effective medical services for the sick poor, to say nothing of the poor sick in the community. Hence I ask you, if you care to listen to my judgment, to build this Charity Hospital with the idea always in mind of taking on a Medical School. It is of extreme importance from a standpoint of economy that this plan be kept in mind, since in construction, even in laying the foundations, the one must be built to supplement the other in departments which are common to both. I therefore consider it not at all previous, in sequence of time, to treat both as one and developed parallel to each other.

We have at least one brilliant example of this scheme here in America in the Johns Hopkins Medical School. This is copied, it is true, from the schools in Germany where the scheme has for a long time been accepted universally and would have been accepted in France, had the idea not been German. But this pregudice of the French, is to be regretted, since they have allowed their German neighbors to become excellent and at the same time placed themselves sadly on the retrograde.

I have before me a copy of a few pages from the records of the Johns Hopkins Medical School, describing its development and the letter written by Edward S. Harkness to the Presbyterian Hospital of New York during February of last year offering a large fortune in support of a combination between the Presbyterian Hospital and the College of Physicians and Surgeons. Though my reading these pages may be somewhat tedious, I ask you to bear with me so that you may get the data.

The founder of the Johns Hopkins University, in devoting a large fortune to the Hospital, had in view the organization of a school of medicine. In his letter addressed to the Trustees of the Hospital, dated March 10, 1873, these significant words occur:

"It will be your especial duty to secure, for the service of the Hospital, surgeons and physicians of the highest character and greatest skill . . . . . In all your arrangements in relation to this Hospital, you will bear constantly in mind that it is my wish and purpose that the institution shall ultimately form a part of the Medical School of the University for which I have made ample provision in my will".

When the University was opened in 1876, arrangements were made for instruction in those sciences such as physics, chemistry, and biology, which lead up naturally to the professional study of medicine. In 1884 the professorship of pathology was filled and the pathological laboratory was opened. In 1899 the John Hopkins Hospital was opened, and the physician, surgeon, and gynecologist in chief to the Hospital were appointed to the professorships, respectively, of medicine, surgery, and gyne-

cology and obstetrics. At the same time the professor of psychiatry was appointed. Opportunities for instruction were afforded to graduates in medicine. Ampler endowment, however, was needed to complete the organization of a medical department.

Gifts amounting to $111,731.68 most of which were offered to this University in October, 1890, by a committee of women, and an additional gift of $306,977, offered to the University in December, 1892, in addition to her previous subscription, by Miss Mary Elizabeth Garrett, made up, with other available resources, the amount of $500,000, which had been agreed upon by the Trustees as the minimum sum to be secured for the opening of the Medical Department. These generous contributions were made upon condition that women be received upon the same terms as men.

This endowment, added to the available resources of the John Hopkins Uuiversity and the John Hopkins Hospital, enabled the Trustees to complete the organization of the Medical Department and to open it for instruction in 1892.

The Eudowment of the John Hopkins Hospital.

The intimate connection between the Medical School and the Johns Hopkins Hospital renders it proper to mention the facilities of the Hospital as an important adjunct to the endowment of the Medical School. By the letter of instruction of the founder,it was provided that the Johns Hopkins Hospital should furnish clinical facilities for the Medical School. In the purchase of the site of the Hospital, the location and arrangement of buildings, the construction of the apparatus for heating and ventilation and all other hygienic appliances, the purpose of medical instruction was constantly borne in mind. The original buildings and grounds of the Hospital have cost upwards of two millions of dollars, and the annual expenditure for maintenance exceeds two hundred thousand dollars. Upon the hospital grounds, not including the Harriet Lane Home and Phipps' Psychiatric Clinic, have been erected twenty buildings, which furnish ample facilities for the the accommodation of 350 in patients and many thousand outpatients. These buildings also provide class-rooms in connection with the out patient department, a large clinical laboratory, a surgical building with rooms for the study of surgical pathology and five operating rooms, several small rooms, several lecture rooms, a clinical amphitheatre and an autopsy amphitheatre, all equipped with ample apparatus for the instruction of students. The administration building furnishes accommodation for a medical staff of forty persons. It also has a large library and reading rooms.

New York, N. Y.
Feb 20th., 1911.

Robert W. DeForest, Esq.,
Chairman of the Building Committee,
of the Presbyterian Hospital.

Dear Sir:-

It has recently come to my attention that a basis of alliance has been suggested between the Presbyterian Hospital and the college of Physicians and Surgeons, the medical school of Columbia University, by prominent members of both institutions, subject to the settlement of details and to the approval of the governing boards of these institutions. This alliance is singularly in line with my own conception of the proper relations between hospital and medical school, and I should be glad to further it.

I have long been interested in that form of charity which has to do with the treatment of human ills, and latterly have become more and more impressed with the extent of the work that a hospital must do on the broadest scientifiic and practical lines, if it at all adequately uses its recources,

The scientific development of medicine has especially interested me recently. and I have become convinced that its real underlying providence and mission to humanity lies more particularly in preventing disease than in merely curing it. All this has increased a growing desire I have had to contribute something which will materially increase the usefulness of a great hospital.

I am convinced that this scientific development can best be accomplished in the hospital and the medical school, and that the two are interdependent, the one on the other. The medical school constantly supplies the physicians and surgeons of the future, who in their early training must have every facility for practical experience and application, which they can only obtain at a hospital where they are taught by the practicing physicians and scientific men. The hospital supplies a vast amount of material for study and research, and should realize that, besides caring for the sick, it has a great obligation towards humanity to use this material both in the training of the younger men and in furthering discoveries in preventive medicine.

I believe that the visiting staff of a hospital does better work for its patients and that its memebrs are kept more up to date, if they include teaching in conjunction with their duties than otherwise; that the hospital and patients directly benefiit

thereby, the former through attracting a better class of internes and attendants because of the teaching facilities, the latter through receiving more careful attention and the latest methods of treatment.

I realize that one of the Presbyterian Hospital's greatest needs in its new hospital plant is a surgical pavilion supplying ample bed facilities and embodying modern appliances.

With these needs in mind, I shall be glad to provide the cost of the erection, upon a site belonging to the hospital, of a surgical pavillion containing 150 beds and equipped with modern appliances; and, conveniently accesible to this pavilion, a complete laboratory for advanced research work.

It also gives me pleasure to offer to the hospital, on behalf of a donor whose name I am not at liberty to mention, money and securities which I estimate to be of the value of $1,300,000, in trust for endowment, the principal to be kept seperate from other funds and the income to be used exclusively toward the support of the scientific and educational work connected with the hospital and referred to in this letter. As I withhold the name of the donor, I guarantee the payment or transfer of this endowment fund to the hospital.

This donor and I would like the privilege of placing appropriate tablets in the new pavilion stating in whose memory the building is erected and the work endowed, and I should wish the privilege of approving any building plans that may be determined upon and to have a voice in the selection of an architect, although I do not urge this last point.

Both of the offers above contained are made on the following understanding and conditions:

1. That the hospital shall admit to the wards students of the medical school to the extent and in the manner permitted by the most approved practice.

2. That the educational institution concerned may make nominations to all positions on the the hospital staff, medical, and special.

3. That the persons occupying for the time being the ranking or foremost professorships in medicine and surgery in the educational institution concerned shall always be nominated to appropriate positions on the staff of the hospital, and that so long as they hold such offices in the hospital, to the intent that under this arrangement the hospital will secure in the treatment of its patients the greatest degree of medical and surgical skill which can be furnished by the school.

4. That the physicians and surgeons of various ranks and their assistants shall have as full privileges as reasonably possible, consistant always with the welfare of patients, of instructing their students in the public wards and the various laboratories of the hospital.

5. That the department of pathology and bacteriology may give teaching to students in the hospital.

6. That there shall be a director of the surgical research laboratory who shall teach in the hospital and who shall always be on the active teaching staff of the school.

7. That the surgical department at the hospital shall publish an annual report of the scientific and clinical work of the year.

8. That the College of Physicians and Surgeons, the medical department of Columbia University, be the medical school with which the hospital makes this arrangement, so long as it is in a position to carry out its share of these conditions and complies therewith. Should it not be in such a position, or fail to comply therewith, another medical school of the first rank may be selected by the hospital.

9. That if the hospital shall not comply with the conditions named in this letter, and should non-compliance continue after notice and reasonable opportunity to fulfill the same, the hospital shall forthwith pay and transfer to me, or to the donor whom I represent, as I may request, the whole of the endowment fund herein referred to. If this non compliance should occur after my death, the repayment shall be made to any person or institution designated for that purpose in my will. After such default and until such payment, the endowment fund shall be held by the hospital in trust solely to make such payment.

The conditions imposed by this letter may from time to time be changed by mutual agreement. My own consent, if living, and that of the hospital shall be necessary to such a change.

While the medical school will benefit from the gifts herein made, and this is expected and desired, its only right to such benefit must come through agreement with the hospital, the school itself having no right hereunder.

Should any of the details of this offer be inconsistent with the necessary basis of the management of this hospital, or should there be other details which in your opinion should be considered by me, I shall be glad to confer with you with respect thereto.

Yours very truly,

(signed) Edward S. Harkness.

Now what are the advantages of this scheme?

The sick poor are usually incapable of choosing their proper medical attendants

and if capable can not secure the best except in such an institution. But in such an institution they are safe without choice, because they get the most skilled attention. They get the most skilled attention because the best fitted men are chosen for them. They are the best because they are chosen on this basis and are forced to maintain this position or lose it.

The student, working under the guidance of his senior, as a young physician, and having his work checked in accuracy by the senior, can do the sick man no harm; on the other hand he offers him the best of work, because, being under examination, he must offer results of scientific exactness, and these results are again confirmed by the senior with the same exactness in teaching the student. The student is always supplementing his theoretical training in the school and having before him living examples of his text book cases. He learns to recognize and treat these cases by the bedside and not merely in imagination, while sitting in his two by four room in the back of a sorry boarding house. He leaves the school better prepared for his practice and the public is relieved of having him gain his experience from it and at its sacrifice.

The physician, chosen on his qualities as a practical man of experience and as a teacher, is forced to maintain this position through doing his work in the lime-light, under the eyes of his colleagues and students. He must "come across with the goods" and through so doing becomes a better man.

The physician not chosen on the staff of the hospital and on the faculty of the school, when he places his charity patient as teaching material, has his diagnosis and treatment confirmed or is corrected in an error. He must also busy himself or lose out. He may force the teacher out and take his place, if he shows himself more capable.

As to who shall be first to take the positions in this hospital and school, there are ample means of finding out and sources of good information, if a Board of Trustees will only take the trouble to inquire.

The community shares in the profit because the whole local profession is elevated, the individual physician is forced to become better, specialization is exaggerated and placed upon a basis of fitness rather than of simple choice.

In following this scheme for Charlotte, let us take up the factors: What has she already and what does she need?

First. She has already five hospitals which I shall purposely not discuss, but would ask that a Committee of Investigation be appointed to look into these hospitals. On this committee let two men in favor of the Charity Hospital and two men opposed to it, go through these hospitals with a representation from the citizens of Charlotte and see the character of these hospitals and the work done there. Then let all these men make out a report to be presented to the citizens as a fair and unprejudiced statement of facts. If the citizens then judge that the Charity Hospital is not needed, let them decide to abandon the scheme.

Second. Charlotte has a School, already bearing perhaps a fair name and supported by its faculty and alumni, men now willing to answer for the school end of this proposed institution of Combined Hospital and Medical School and willing to do the proper thing toward the Hospital, guided by authoritative advice, gained by a Board of Trustees.

Third. Charlotte has a profession of excellent medical men, offering a wide range of choice.

Fourth. Charlotte has plenty of money in generous hands, generous in the sense of placing it properly.

Fifth. Charlotte is located within a rich county, and county and city are upheld by patriotic citizens, who through a small tax are able and willing to maintain the hospital end of such an institution.

Sixth. Charlotte is the recognized center of the Piedmont Section, and on the advice of my Hopkins friends, is the best location in the South for Medicine and Surgery. Their advice is good because they have had the experience of having drawn more heavily from this section than from any other part of the South, and hence are familiar with what we have here. This vantage point would surely not be weakened by the building of such an institution.

It is obvious how these factors may be combined, those given with those to be added, and this institution of combined Charity Hospital and Medical School realized for Charlotte.

If a hotel is an advantage to the city and justly calls forth the contributions of the citizens, such an institution is a double advantage because besides being a medical institution, the hospital part is a large hotel, rooming and boarding patients, nurses and doctors. The school part attracts a body of men, who for at least four years are residents, either to remain as permanent inhabitants or to go out and use their influence in favor of Charlotte, the site of their school. Thus the institution would be building up a drawing card for Charlotte and a desirable type of citizenship, predisposed in Charlotte's favor.

Now why not build such an institution?

Can anyone think of any good reason why not? If you can, let us all hear it. If you cannot, let us get to work and allow such an institution to receive the neglected sick poor and through helping them, obtain the glory of having done a good work of charity.

809-10-11 Commercial Bldg.

The Verumontanum.

By P. R. Terry, M.D., Asheville, N. C.

My paper treats of a subject, which, in my opinion, is very much neglected and overlooked; not only by the general practitioner but by the specialist as well. My object is to bring the attention of the profession to a condition which has such an important bearing upon the physical suffering and mental anguish of a number of our patients: and one which going unrecognized and unrelieved has caused them to fall into the hands of quacks and charlatans.

The subject to which I refer is the verumontanum, a small tit-like projection about one-eighth of an inch in height, placed upon the floor of the prostatic urethra, the anterior slope of which is hollowed out into a small cavity, the sinus pocularis. Within or on the edges of the sinus are found the openings of the ejaculatory ducts; and on either side of the verumontanum on the floor of the urethra are the openings of the prostatic ducts.

The verumontanum is composed of muscular and erectile tissue covered with mucous membrane. It is claimed that the structure prevents the backflow of semen during an orgasm. The appearance of the verumontanum under pathological conditions varies, it is red, hyperæmic, and bleeds easily on being touched, and is often discolored with blood. If not bleeding when brought into view it bleeds considerably when touched; and is enlarged and often covered with irregular excrescences. The greater the degree of inflammation, the more intense is its color. Finger describes a later stage, a connective tissue change with contraction of the ejaculatory ducts. Cases of polypi projecting from the surface of the structure have been described. I have seen one such case. The causes of these pathological conditions are not confined to venereal diseases alone. Among the causes we find excessive masturbation or coitus, prolonged stimulation without gratification, withdrawal or interrupted intercouse, and prolonged coitus.

The symptoms are numerous, and many of you will probably recognize old friends. One of the principal symptoms I have found to be, is frequency of urination. In a bladder containing two to four ounces the internal sphincter relaxes, urine enters the posterior urethra, comes in contact with the inflamed verumontanum, producing intense desire to urinate. Unpleasant heat or pain in the urethra, prostate, neck of bladder, or in all three. Intense burning after urination; disagreeable feelings or sensations of pressure in the rectum; involuntary seminal emissions after sexual excitement, or even after constipated stool; nocturnal emissions often accompanied by intense acute pain. The posterior urethra is extremely sensitive to the passage of a sound, the patient complains of an intense burning and pain when the tip of the sound comes in contact with the inflamed verumontanum. The hyperæmic condition of the verumontanum may give rise to sexual desires and lead to excesses; e.g., in the newly made widower his sexual desires may be traced to compensatory hypertrophy of the verumontanum.

One of the most distressing sequela of this condition is impotence. The first sign of this condition is an abnormally erotic state, the mere conversation with or the sight of a sexually attractive woman produces an erection. Premature ejaculation, followed later by imperfect and even absent erectile power, mental depression, tending toward grave sexual neurasthenia and in some cases insanity.

In treating my cases I use the Swinburne tube or posterior urethroscope, which is a tube somewhat resembling a stone searcher, the window being on the convex surface of the angle, being closed by an obturator during introduction. I prefer the squiers lamp as the mode of illumination, the light being reflected and during treatment the whole field is brightly illuminated, the operator has more room to work. There are a great number of instruments on the market, the differences being only refinements as to details, the basic principals being the same.

The tube is introduced, patient in dorsal position, hips slightly elevated, a slight jerk is felt as instrument passes cut off muscle. Advance about one-half inch and verumontanum should be in view. Surgical asepsis should be observed in every case.

The treatment is very severe, and is one that should be styled heroic. We use silver nitrate but not in low dilutions, one or two per cent. solutions causes great distress and results are nil. Ten to twenty and thirty per cent. solutions causes very little distress; one or two urinations rather painful and burning. The applications should not be oftener than every seven or ten days, of course the reaction and patients condition must be taken into consideration. Sometimes one application results in a cure, I have never made over four applications. Many genito-urinary specialists use the

silver nitrate pencil, or the silver nitrate fused upon the end of an applicator, claiming better results, and that the reaction is less severe. I have used both, but have gone back to the 30% solution, as my results have been all that could be desired. I have treated a few cases by injecting, with a long shaft syringe, two or three drops of a ten per cent. solution into the sinus pocularis. I discontinued this method as the results were no better than direct application with swab, and reaction was more severe. It is advised to confine applications to verumontanum alone, for if we touch up inflamed posterior urethra with nitrate of silver, it will give rise to frequency and urgency. It is also best to pass a few full sized sounds to obviate any chance of constriction. In any case where we find the gonococci present, seminal vesiculitis, or a prostatitis, the urethroscope is contraindicated; we should clear up these conditions first. If polypi are present, the urethral snare or curette is indicated, the hemorrhage being surprisingly slight, after operation.

Cases.

B. C., age 26. Family history negative, had been treated two years for gonorrhoea. At time of consultation had mucoid discharge, no gonococci present, a few shreds in urine, cystoscopic examination, prostate and seminal vesicles negative. Patient complained of frequency of urination, pain in urethra independent of urination, general condition poor. Examination of posterior urethra showed hyperæmic sensitive and bleeding verumontanum. Application of 25% nitrate of silver solution once a week for three applications, in conjunction with tonics, resulted in a cure. In this case the reaction after the first application was very severe, but patient showed marked improvement after reaction subsided.

S. N., age 24, married two years, has one child. Cystoscopic examination, urine, and seminal vesicles negative, prostate slightly boggy. Up to age of 17 masturbated regularly, and at beginning of sexual life practiced intercourse to excess, nearly every night and sometimes two and three times per night; after marriage continued excesses. Patient came into office complaining of painful premature ejaculations, inability to keep erections, no satisfaction from intercourse, yet the desire was constant, pain in urethra, frequent and painful urination, patient being compelled to void about every half hour. No history of venereal diseases. This patient was the picture of despair and profoundly neurasthenic with suicidal tendencies. Examination of posterior urethra revealed enlarged, congested, easily bleeding verumontanum. Patient was put on sexual restrictions, and treated with silver nitrate; recovery complete.

B. D., age 18, came into office complaining of loss of power, history of playing with girls until sexually excited followed by masturbation, as he was afraid of becoming diseased, tried to have intercourse a number of times but failed at each attempt as penis would become only half erected, accompanied by premature ejaculations. Cystoscopic examination, urine, prostate and seminal vesicles negative. Treatment with silver nitrate, and a heart to heart appealing to his manhood and shaming him resulted in a cure.

I could mention a number of cases in some of which the results were not so good, but all the cases that have come under my observation have shown a marked improvement under proper treatment.

I do not wish to give the idea that treating the verumontanum with silver nitrate is a cure all, or that all cases of sexual neurasthenia, impotence, nocturnal emissions or premature ejaculations are due to a pathological verumontanum, for they are not. I do wish to impress upon you, however, the importance of a sexual history and examination of the posterior urethra in patients giving the above symptoms; as by so doing we may bring happiness and sunshine into many homes, where before existed only misery and despair.

221 Legal Building.

Danger Due to Substitution.

Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm names of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme court of Victoria at Melbourne, and others reported before in the medical literature, show that every physican should see that his patient gets exactly what he prescribed. No "just as good" allowed.

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EDWARD C. REGISTER, M. D., EDITOR

CHARLOTTE, N. C.

NEW MEDICAL LAWS IN NORTH CAROLINA.

An act to amend sections four thousand four hundred and ninety-five, four thousand four hundred and ninety-eight, and four thousand five hundred and one of the Revisal of one thousand nine hundred and five, relating to the practice of medicine, and to require an additional educational qualification in order to obtain license to practice.

The General Assembly of North Carolina do enact:

SEC. 1. That section four thousand four hundred and ninety-five of the Revisal of one thousand nine hundred and five be amended by striking out the word "five" in line seven, and inserting in lieu thereof the word "two."

SEC. 2. That section four thousand four hundred and ninety-eight of the Revisal of one thousand nine hundred and five be amended by inserting in line five between the word "clinical" and the word "instruction" the words "and scientific."

SEC. 3. That section one of chapter eight hundred and ninety of the Public Laws of one thousand nine hundred and seven be amended by striking out the word "three" in line eight, and insertinu in lieu thereof the word "four."

SEC. 4. That section four thousand five hundred and one of the Revisal of one thousand nine hundred and five be amended by striking out the word "ten" in line two, and inserting in lieu thereof the word "fifteen."

SEC. 5. That section four thousand five hundred and one be also amended by adding thereto the following: "Whenever any license is granted without examination, as authorized by chapter eight hundred and ninety of the Public Laws of one thousand nine hundred and seven, said applicant shall pay to the Secretary of the Board a fee of fifty dollars before license or diploma is issued."

SEC. 6. That every applicant presenting himself to the State Board of Medical Examiners shall before he is admitted to examination satisfy said Board that he has an academic education equal to the entrance requirements of the University of North Carolina, or furnish a certificate from the Superintendent of Public Instruction of the county that he has passed an examination upon his literary attainments to meet the requirements of entrance in the regular course of the State University. Provided, however, that all citizens of this State who have already begun the study of medicine shall be exempt from the operations of this section until the regular meeting of the State Board of Medical Examiners to be held in the year one thousand nine hundred and seventeen.

SEC. 7. That the President and Secretary of the Board of Medical Examiners of the State of North Carolina are hereby invested with power to administer oath to all persons who may apply for examination before said board.

SEC. 8. That all laws and clauses of laws in conflict with any of the provisions of this act are hereby repealed.

SEC. 9. That this act shall be in force from and after its ratification.

In the General Assembly read three times and ratified this the — day of February, 1913,

AN EMERGENCY.

There are now over 200 inquiries for admission of feeble-minded children to the School for Feeble-minded at Kinston. The State Board of Charities reports 344 in alms houses and jails. The Legislature of 1911 appropriated the sum of $60,000 to begin the building of the School for Feeble-minded. This sum has been spent, or provision made for spending it, yet the institution will lack nearly $40,000 of having enough to begin its operation. The money must come from somewhere to put this school in operation before anything can be accomplished.

The School for the Feeble-minded should be made large enough to care for at least five or six hundred of these children. By for the larger number of these defectives are the offsprings of defectives, and the State has allowed nearly ten generations to increase and has done nothing to prevent its decrease.

Prevention *seems* to cost much, yet the only way to really check this increase is to take all of these cases into the institution and prevent them from bringing into the world others like themselves. There are other cases which education in eugenics will very largely help to regulate. The first step should be to make provision this year at this session of the Legislature for the five or six hundred now entitled to admission.

Unless the citizens of the State are wise enough to check such measures at once and to check this constantly growing number they will continue to spend their money

ineffectually. Let's persuade our Legislature to take liberty however, to make proper provision for the care of the few feebleminded now, rather than them and their offspring in another generation. It is the State's insurance policy, pure and simple. It is merely a matter of adequate appropriations.

THE THERAPEUTIC PRINCIPLES IN THE TREATMENT OF TYPHOID.

The present day conception of typhoid fever in the light of modern information concerning immunity and infection, is that it is a septicæmia produced by certain types of bocteria of the typhoid or paratyphoid group complicated more or less often with other forms of bacteria which are normal or occasional inhabitants of the intestinal tract.

On general principles, we attempt first of all in a case of sepsis to eradicate the primary focus. Secondly, we attempt to increase elimination to a point where the maximum amount of the offending bacteria or their products are thrown out of the system as speedily as may be. Thirdly, we attempt by means of supportive measures and stimulants, systemic and cellular, to increase the protective powers of the body.

Applied to the treatment of that form of sepsis known as typhoid fever, we find it impossible to eradicate the so-called primary foci, i.e., the ulcerations in the bowel. We have hitherto attempted various procedures along the line of intestinal antisepsis by means of various drugs of more or less toxic character. These so-called intestinal antiseptics are, at best, doubtful agents and the consensus of reliable opinion seems to be that attempts to markedly reduce the pathological flora of the intestine by their use is a futile procedure. However, we have a fairly efficient agent by which the bacterial content of the bowel can be changed somewhat for the better, viz.. good water. Experiments carried on at the University of Illinois recently tend to show that the bacterial content of the intestine is reduced directly in proportion to the amount of water consumed. Clinically, the ingestion of large amounts of water is followed by very satisfactory results which, however, cannot be attributed entirely to the relative degree of intestinal antisepsis attained, but must in large part be credited to the increase of the elimination of noxious products of the infection.

The increased elimination takes place chiefly through the agency of the kidneys, and in favorable cases the urinary secretion will reach from seven to twelve litres in twenty-four hours. The clinical results of the administration of large quantities of water, either as such or in the form of lemonade, are manifested by the absence of extreme temperature, little or no delirium, no tympanites, freedom from hemorrhage, perforation, or other complication, and by an apparent reduction in the number of days which the fever persists. Convalescence is also hastened and relapses are rare. In cases seen late with high temperature and delirium it is necessary to administer the water by means of a continuous normal saline enema, following which, improvement may confidently be expected as soon as the urinary excretion reaches five or six litres per twenty-four hours.

Aside from the usual adjuvants used for the relief of the pains, heart weakness, bacilluria, etc., and from the diet and the baths, a very vital procedure theoretically is the administration of vaccines. Callison (1) has investigated and reported this phase of the treatment of typhoid rather completely, and is favorably impressed with the results, especially when administered early in cases.

The vaccine may consist either of sensitized living bacteria (typhoid) or killed cultures, and should be administered beginning with doses of from three to five hundred million, increasing the dose at each administration one or two hundred million. The interval between the doses should be four or five days, as this is the interval necessary for the formation of the necessary anti-bodies. In cases favorably affected, the temperature curve will show a decided drop on the fourth or fifth day after each injection. He claims that the fever course is materially shortened, complications are rare, and the mortality in a series of some hundreds of cases was very much reduced.

It would seem that by the use of large amounts of water internally and the use of vaccines, it should be possible to reduce the mortality of typhoid to an insignificant figure. E. G. E.

(1) Amer. Jour. Med. Sci., Sept. 1912.

THE THERAPEBTIC USE OF NORMAL BLOOD SERUM.

Of late years attention has been called to the use of normal blood serum in certain conditions which seem to be associated with meiabolic perversions of a certain class.

The rationale of its use has been elucidated by the biochemical investigations of Ehrlich, Wassermann and others, but the exact nature of the reactions which take place are not entirely clear.

The hemorrhagic diseases perhaps offer the most striking example of the efficacy of the serum therapeutics. In the hemorrhage of hemophilia, hypodermic or intravenous injections of twenty to two hundred c.c. or

more, are followed by the most striking results. It is often possible to stop a hemorrhage in a case of hemophilia by merely allowing a few drops of blood (normal) to run onto the bleeding point.

In the hemorrhagic diseases of the newborn it has been used with almost universal success. Its use in the purpuric arthritides and in erythema nodosum has been of distinct advantage. In certain forms of eczema its use has been decidedly beneficial. In the vomiting of pregnancy, complete relief has been obtained by the injection of blood serum from another woman who is also in the same stage of pregnancy, but who is free from the symptoms of toxemia.

Certain cases of inanition following prolonged infections or chronic intoxications of the milder grades readily yield to the administration of normal blood serum. For instance, in a case of a severe burn involving the thigh, buttocks and perineum, in which healing and reparative processes had apparently come to a standstill after some ten weeks, the administration of twenty c.c. of normal serum on three successive days was followed by rather marked and steady improvement in the patients nutrition, and the process of healing once more commenced and progressed more rapidly than before the interruption.

The biochemical reactions by which these things are brought about are more or less obscure. In the administration of blood serum to a case of hemophilia it has not been determined whether we are supplying complement or amboceptor. It is fair to suppose that calcium plays a rather important role in the chemical construction of the deficient body (complement or amboceptor). The amount of calcium supplied in an effective dose of blood serum is almost infinitesimal.

In cases of eczema and inanition, the same problem in a little different aspect is presented. Here it has not been shown that the calcium content of the blood is deficient, or that there exists a deficiency in any of the other elemental constituents of the blood. However, the problem is essentially the same. There is a deficiency in some ferment (complement) or antitoxin (amboceptor), which is supplied by the administration of normal blood serum.

In the vomiting of pregnancy there would seem to be an intoxication produced by certain indefinite chemical bodies. These bodies are normally changed into innocuous substances by the action of certain complement or amboceptor, or both, in pregnant women who do not suffer from symptoms of toxemia. The administration of serum from such a woman to a woman in whom these amboceptor and complement are lacking, speedily relieves these untoward symptoms. Failure to produce the desired results must be set down to the fact that the donor and recipient are in different stages of pregnancy, although it not infrequently happens that the patient is relieved even when this is true.

The transfusion of blood, direct or indirect, may owe part of its efficiency in certain cases to the addition of complement or amboceptor to the blood serum of the recipient. It is not usually performed with that object in view, but with the object of adding to the volume of vitiated blood of the recipient a volume of normal blood with all its component parts.

"HIPPED."

To be carried away with a certain idea, a cartain belief, a certain creed, or certain views of things is a dangerous state of mind for a medical practitioner. It may be said that to be "dead gone" on this, that or the other idea be it religious, political, scientific, or even medical, your thought fountain is turbid. Any mind that believes it has a corner on the only truth, or the only rule of professional conduct, is invariably in a bad way. Individuals with such minds can neither grow nor develop, neither can such a mind develop talent nor power. The latent possibilities of such a mind are clogged, and move but slowly and only in one direction. It has but a single viewpoint—that is all it will digest. The greater part of its power is dormant. Those parts that are in action are over-worked and the inevitable result follows: that which is overworked is on the road to ill health or deterioration. That is probably the reason so many people are dead in the head after they reach forty or fifty years of age.

The normal, healthy, generous mind, such as every person who attempts to practice the healing art should have, is broad, tolerant, and comprehensive; the abnormal, the "hipped" mind, is narrow, fanatical, and dwarfed. The normal mind can see the good and true unfolding everywhere and in everything where truth and good abide. And their intuition gives them power to see evil where it tries to masquerade as good. The abnormal mind can see good only in its own pet ideas, systems and plans, and brands all else as evil or false.

The normal mind does its own thinking, and oh, how necessary is this to the successful practitioner of medicine. The "Professor" who wrote the book has no corner on all of the knowledge in his so called "specialty." Knowledge, special knowledge, is the product of clean thought, thoughts gathered for food from every possible source. The abnormal mind follows

a fixed system of belief; it does not think, it simply exercises a sort of mental imitation expressing shop-worn, second-handed views that such a mind has had, like a phonographic record, impressed by some so-called authority. In the practice of medicine, oh, the blunders that such minds have committed blindly following "Authority."

The normal mind grows naturally and orderly, it is usually found in persons who prefer to *wear out* rather than *rust out*. Their mental material develops as the flowers of the field, invigorated and inspired by the sunshine of universal truth. The abnormal remains a puppet, cramped and dwarfed by the limitations of its one-idea system, the abnormal mind is practically closed to everything but the illusions of its own isolated "outhority" and beliefs, for a one-idea system can contain nothing but illusions—*the truth* is the result of all points of view. The normal mind is open to the light, the wisdom, the experience, and the accumulated knowledge of all ages and all times.

It is such a simple matter to distinguish between the two minds described. Somehow or other, patients, who are not supposed to know, also have a habit of distinguishing and choosing between two such minds.

The Fifteenth Annual Meeting of the Tri-State Medical Association.

The fifteenth annual meeting of the Tri-State Medical Association of the Carolinas and Virginia, was held in Norfolk, Va., February 19-21.

The meeting was called to order by Dr. Southgate Leigh, of Norfolk, chairman of the committee on arrangements, with more than two hundred physicians and surgeons in attendance. Dr. Leigh presented Hon. W. R. Mayo, mayor of Norfolk, who made the address of welcome. Dr. F. H. Hancock delivered a welcoming address on the part of the medical profession of Norfolk. Dr. Tayloe, of Washington, N. C., made the response to the address of welcome. All these addresses were most interesting, and caused much applause and comment on the part of the profession.

Dr. A. E. Baker, of Charleston, S. C., president of the association, was then introduced by Dr. Leigh. Dr. Baker's address was delivered in a most interesting and enthusiastic manner. He covered many interesting subjects in his address, which was heard with the closest attention.

Other interesting and important papers presented during the first day's session were as follows:

"Practical Remarks on the Diagnosis of Certain Forms of Fracture"—Dr. Armistead Tayloe, Washington, N. C.

"Some Difficulties and Dangers in the Operative Treatment of Fractures"—Dr. Joseph Graham, Durham, N. C.

"Ureteral Calculi"—Dr. A. B. Knowlton, Columbia, S. C.

"The Advantage of Perineal Over Suprapubic Prostatectomy"—Dr. A. J. Crowell, Charlotte, N. C.

"The Treatment of Facial Paralysis by Nerve Transplantation"—Dr. Stephen H. Watts, University of Virginia.

"Pseudo-Peritoneal Cauls of the Colon"—Dr. John W. Long, Greensboro, N. C. (Illustrated with Lantern Slides).

"Gastric Motility in Infants Shown by the Roentgen Ray"—Dr. Maynard Ladd, Boston, Mass. (Invited Guest).

"The Treatment of Summer Diarrhœa in Infants"—Dr. William Weston, Columbia, S. C.

The second day's session was given over entirely to the reading and discussion of papers. Dr. George W. Crile, of Cleveland, Ohio, read a very valuable paper on "The Prevention of Shock After a Surgical Operation by the Use of Local Anæsthesia." His paper was illustrated by steropticon slides, and was one of the best papers read at this meeting.

Dr. Maynard Ladd, of Boston, Mass., an invited guest and one of the most prominent physicians in the United States, read a paper on "Gastric Motility in Infants as Shown by the Roentgen Ray." His lecture was also illustrated by stereopticon slides and was heard with the closest attention. The subject was one of unusual interest to all physicians and surgeons and Dr. Ladd was questioned by many of the physicians after he had finished the lecture.

Dr. Stuart McGuire, of Richmond, Va., was among the other prominent physicians who were heard and his subject was "Hyperthyroidism and Its Treatment." Subjects were briefly touched upon by other members of the society.

Dr. Joseph A. White, of Richmond, Va., censured in expressive language what he called the "massacre of the tonsil." His disapproval of wholesale operation provoked dissimilar views at the afternoon session.

Dr. White's characterization of indiscriminate operation as the "immolation of the tonsil on the altar of fashion," followed the statement that "The tonsil craze is now at its height and like the surgical craze for removing the appendix has spread among the profession and the public as an epidemic.

"I don't mean to say I advocate leaving diseased tonsils undisturbed, but I do say

that all tonsils are not bad tonsils, and that the excessive radicalism that has become rampant goes too far in the destruction of a part of the economy that a divine Providence gave us for some useful purpose.

"I wish again to make a protest and enter a word of warning here in my own home society about the reckless destruction of a possible necessity and a much maligned organ.

"As long as our knowledge of the function of the tonsil is in such an uncertain state, should we not give it the benefit of the doubt. Don't understand me to say the tonsil should never be removed. There is enough clinical evidence to show that in a diseased condition it may do much harm, and then, and then only, should it be operated on."

Dr. White's opinion did not go unchallenged. Dr. W. E. Driver, of Norfolk, Va., was one of those who questioned his position.

On the last day of the meeting—the 21st—the morning session was almost entirely taken up with the subject of malaria.

Dr. W. S. Thayer, of Johns Hopkins Hospital, Baltimore; Dr. Charles Craig, of the United States Public Health Service, Washington, and Dr. C. C. Bass, of Tulane University, New Orleans, were the speakers, and while each talked along the same line, all were heard with the same close attention and were roundly applauded when they had concluded their papers.

Dr. Thayer was the first physician to read a symposium on malaria and he went into the subject deeply, explaining it so that laymen as well as practitioners could understand.

Many other important papers were read at this session and the discussions were entered into with much enthusiasm. At the afternoon session the following officers were elected:

President—Dr. Southgate Leigh, Norfolk, Va.

Vice President—Dr. Stephen Harnsburger, Catlett, Va.

Vice-President—Dr. E. Reid Russell, Asheville, N. C.

Vice President—Dr. J. H. Taylor, Columbia, S. C.

Secretary—Dr. Rolfe E. Hughes, Laurens, S. C.

Wilmington, N. C., was chosen as the next place of meeting.

The Executive Council for the coming year consists of: Dr. J. Shelton Horsley, Richmond, Va.; Dr. D. A. Stanton, High Point, N. C.; Dr. A. E. Baker, Charleston, S. C.; Dr. Samuel Lile, Lynchburg, Va.; Dr. Edwd. C. Register, Charlotte, N. C.; Dr. Wm. W. Ferrell, Rock Hill, S. C.; Dr. Jas. H. Culpepper, Norfolk Va.; Dr. J. Howell Way, Waynesville, N. C.; Dr. Rufus B. Epting, Greenwood, S. C.

DR. SOUTHGATE LEIGH.

The eminent Norfolk, Va., surgeon who was elected President of the Virginia State Medical Society at its last session in October, 1912, was the deserved recipient of additional honors in being elected to the presidency of the Tri-State Medical Association of the Carolinas and Virginia at the meeting in Norfolk last month. With the high average standards of this Association, and the many men of professional prominence in its ranks, it would really be a difficult matter for the Tri-State to honor with its highest gift any of its members who would not be worthy and well qualified to discharge the duties incident to the presidency, yet the selection of Dr. Leigh at this time was most fitting and gave peculiar satisfaction to his many friends and admirers both within and without the membership of the association. A physician of great erudition, a skilled surgeon, one of Norfolk's leading citizens (being President of the City Council at this time) and a kindly, lovable Virginia gentleman, it gave great pleasure to his colleagues to thus accord the mark of their most distinguished favor in his own home city. With his accustomed energy and ability to carry to success his many undertakings, predictions of a most prosperous year for the association culminating in another successful meeting in the Old North State in 1914 are in natural order and the inevitable expectation.

DR. ARCHIBALD E. BAKER.

During the fifteen years since the organization of the Tri-State Medical Association of the Carolinas and Virginia the sessions of this body of distinguished medical men have been presided over by some of the most eminent doctors in the three constituent States. The President at the recent meeting in Norfolk, Va., Dr. Archibald E. Baker, of Charleston, S. C., not only held well to the previously established high standards of personal and professional excellence, but added thereto. As President he was dignified and courteous in his bearing, graceful and gracious in his rulings, ever alert to every suggestion coming from the floor, prompt to announce his decisions, gentle and affable to all, with an overcrowded program and a large attendance of enthusiastic doctors the majority of whom are ready and fluent debaters on scientific topics, he listened patiently to every one, pressed the completion of the session's duties to a satisfactory finish and retired

from the Presidency with added laurels to his already enviable fame as an erudite doctor, a skilled surgeon and one of the most lovable of Southern gentlemen.

The social features of this meeting were by no means a small part.

Dr. Southgate Leigh, of Norfolk, entertained the members of the association and their visiting friends at the Country Club on the night of the 19th. This was one of the most enjoyable of all the social features. The programme was most excellent, and the menu very tempting. Everything seemed to be in harmony with the occasion.

The next day at 12:30 o'clock the meeting adjourned and the physicians and surgeons went, by special train, to Cape Henry, Va., where an oyster roast was given by the Norfolk Convention Association. This was another most pleasant entertainment for the doctors.

On the afternoon of the 21st a most elaborate reception was given in honor of the visiting physicians, by the staff of the Naval Hospital in Portsmouth, Va. It was quite a pleasure to the visitors to have an opportunity to inspect a government hospital.

The last of the social events of the meeting was the banquet at the Monticello Hotel, given by Dr. W. E. Driver, of Norfolk.

At this banquet the physicians discussed thoroughly the subject of malaria. Enthusiastic applause showed that physicians of three States endorsed efforts that are being made by altruistic members of the profession to eradicate the disease from the Southland.

The menu for this banquet was one that tempted and satisfied.

It may well be said that Norfolk is one of the best cities in the South to be entertained in.

The following is a copy of the entire business programme:

Wednesday, February 19th, 10 a. m.

Place of Meeting—Assembly Hall, Monticello Hotel, Norfolk, Va.

Called to order by Dr. Southgate Leigh, Chairman Committee of Arrangements.

Divine Invocation, Rev. S. W. Melton, D.D., Norfolk, Va.

Address of Welcome to City—Hon. W. R. Mayo, Mayor of City of Norfolk.

Welcome Address on Part of Profession—Dr. F. H. Hancock, President Norfolk County Medical Society.

Response—Dr. John P. Munroe, Charlotte, N. C.

Fifteenth Annual Session of the Tri State Medical Association declared formally opened and Dr. Leigh presents Dr. Arch E. Baker, the President.

President's Annual Address—Dr. Arch E. Baker, Charleston, S. C.

PAPERS:

"Some Cases Illustrating Ocular Disturbance Due to Diseases of the Nose and Accessory Sinuses"—Dr. John E. Weeks, New York (Invited Guest).

"The Frequency of Mastoid Disease"—Dr. J. W. Jervey, Greenville, S. C.

"A Chorioditis of the Eastern Part of Virginia and the Carolinas"—Dr. Wilson E. Driver, Norfolk, Va.

"Report of an Interesting Case of Congenital Cataract in Patient 29 Years Old"—Dr. E. Reid Russell, Asheville, N. C.

"Anti-typhoid Inoculation as a State and Municipal Duty"—Dr. F. A. Coward, Columbia, S. C.

"Ophthalmic Interpretations by the Internist"—Dr. Houston B. Hiatt, Ashboro, N. C.

"Trigeminal Dural Neuralgia"—Dr. Beverley R. Tucker, Richmond, Va.

"Facial Neuralgia: Its Surgical Treatment, Illustrative Cases"—Dr. Addison G. Brenizer, Charlotte, N. C.

"Acidosis"—Dr. W. S. Gordon, Richmond, Va.

"Pathogenesis of Some Mental Disorders—Practical Issues"—Dr. Tom A. Williams, Washington, D. C.

"Habit, the Power that Dominates"—Dr. Jas. K. Hall, Richmond, Va.

"Gastro-Intestinal Therapy"—Dr. J. N. Upshur, Richmond, Va.

"The Temperature in Tuberculosis"—Dr. Thompson Frazier, Asheville, N. C.

"The Importance of Determining the Infecting Focus and Isolating the Specific Agent in Cases of Infectious Polyarthritis"—Dr. James McC. Tompkins, Richmond, Virginia.

"The Salts of Emetine as a Specific in Amœbic Dysentery"—Dr. Wm. Allan, Charlotte, N. C.

"The Relationship of Myocardial Degeneration to Neurasthenia"—Dr. J. Allison Hodges, Richmond, Va.

"Diagnosis of Pellagra"—Dr. E. H. Bowling, Durham, N. C.

"Fifteen Years' Experience with Electricity in the Treatment of Chronic Disease"—Dr. J. C. Walton, Richmond, Va.

"Emergency Syphilis"—Dr. T. W. Murrell, Richmond, Va.

"Practical Remarks on the Diagnosis of Certain Forms of Fracture"—Dr. Armistead Tayloe, Washington, N. C.

"The Treatment of Summer Diarrhœa in Infants"—Dr. William Weston, Columbia, S. C.

"Indigestion, a Danger Signal"—Dr. Matt O. Burke, Richmond, Va.

"Some Difficulties and Dangers in the Operative Treatment of Fractures"—Dr. Jos. Graham, Durham, N. C.

"Ureteral Calculi"—Dr. A. B. Knowlton, Columbia, S. C.

"The Advantage of Perineal over Suprapubic Prostatectomy"—Dr. A. J. Crowell, Charlotte, N. C.

"Hyperthyroidism and Its Treatment"—Dr. Stuart McGuire, Richmond, Va.

"The Treatment of Facial Paralysis by Nerve Anastomosis"—Dr. Stephen H. Watts, University of Va.

"Tuberculosis of the Kidney"—Dr. Robert C. Bryan, Richmond, Va.

"The Use of Large Doses of Hexamethylenamine in the Treatment of Infections of the Bowel and Bile Tract, Especially Before and After Operation to Prevent Tympany"—Dr. G. Paul LaRoque, Richmond, Va.

"An Etiological Factor in Gall Bladder Disease"—Dr. S. S. Gale, Roanoke, Va.

"Diarrhœa as a Symptom of Ulcerative Conditions of the Rectum"—Dr. E. H. Terrell, Richmond, Va.

"Surgical Significance of Uterine Hæmorrhage"—Dr. J. E. Rawles, Suffolk, Va.

"Sliding the Rectum in the Cure of Various Defects"—Dr. Charles E. Robins, Richmond, Va.

"Report of a Case of Gun shot Wound of the Liver with Recovery"—Dr. Lucien Loften, North Emporia, Va.

"Ureteral Catheterization"—Dr. James H. Culpepper, Norfolk, Va.

"The Treatment of Abortion by the General Practitioner"—Dr. Virginius Harrison, Richmond, Va.

"The Roentgen Ray in the Diagnosis of Nephrolithiasis"—Dr. James W. Hunter, Jr., Norfolk, Va.

"Dentigerous Cysts—Report of a Case"—Dr. C. C. Coleman, Richmond, Va.

"The Value of Cystoscopy from the General Practitioner's Viewpoint"—Dr. Parron Jarboe, Greensboro, N. C.

"A Comparison of the Different Methods of Administering Nitrous Oxide Oxygen"—Dr. Southgate Leigh, Norfolk, Va.

"Past and Present Treatment of Fractures"—Dr. J. L. Wiggins, E. St. Louis, Mo. (Invited Guest).

"Surgical Treatment of Pulmonary Tuberculosis"—Dr. Mary Lapham, Highlands, N. C.

"The Orthopedic Treatment of the Results of Infantile Paralysis,"—Dr. Michael Hoke, Atlanta, Ga.

"Ectopic Gestation, with the Report of a Unique and Interesting Case"—Dr. Sam'l Lile, Lynchburg, Va.

"Surgical Treatment of Intestinal Stasis"—Dr. J. Shelton Horsley, Richmond, Va.

"Remarks on Some of the Surgical Complications of Labor"—Dr. J. E. Cannady, Charleston, W. Va.

"The Correlation Existing Between the Surgeon and Internist Today as Compared with Thirty Years Ago"—Dr. J. F. Highsmith, Fayetteville, N. C.

"Observations of Results from Vaccination against Tuberculosis"—Dr. C. A. Julian, Thomasville, N. C.

"Report of Seven Cases of Foreign Bodies Removed from the Larynx, Bronchi and Oesophagus"—Dr. E. W. Carpenter, Greenville, S. C.

"Early Diagnosis of Diseases of the Liver"—Dr. Alex G. Brown, Jr., Richmond, Va.

"Irregular Uterine Contractions of Labor"—Dr. J. H. Hiden, Pungoteague, Va.

"Eugenics"—Dr. Sophia Brunson, St. Matthews, S. C.

"Disease Prevention in Rural Districts"—Dr. Wm. M. Jones, Greensboro, N. C.

"The Cultivation and Growth of Tissue Artificially"—Dr. J. H. Taylor, Columbia, S. C.

"Report of Cases of Tuberculosis in which Syphilis Seemed Not to be Present; Treated with Salvarsan and Neosalvarsan, Apparently Cured After Four Intravenous Injections"—Dr. Theodore Maddox, Union, S. C.

"Lithopedion in the Abdomen 32 Years"—Dr. John W. Dillard, Lynchburg, Va.

It is with genuine pleasure that we call the attention of the medical world to the splendid record made by Moore's Brook Sanitarium since its establishment nine years ago. Moore's Brook is a handsome private sanitarium, ideally located in the foot hills of the Blue Ridge Mountains, one mile from Charlottesville, Va., on the trunk lines of both Southern and C. & O. railroads, and within sight of historic old Monticello and the University of Virginia. Dr. D. M. Trice, the resident physician, has had wide experience as an alienist, as, save for the three years spent in general practice, immediately after his graduation from the Hospital College of Medicine of Louisville, Ky., in 1890, he has been practicing his special line in several of the best private and public hospitals in the North and West, preparatory to the opening of Moore's Brook, where he has endeavored to combine all the best and eliminate the worst features of other hospitals, and the result has justified the care and interest bestowed upon it. Cheerful and homelike, hygienic and beautiful surroundings, pure mountain air, and up-to-date treatment

combine to make it one of the foremost hospitals of the South.

Moore's Brook, a private sanitarium for both sexes, for the treatment of mental and nervous cases, and alcohol and drug habitues. Established 1903, in the foot hills of the Blue Ridge. Beautiful and hygienic surroundings. All modern conveniences. Splendid equipment. Up-to-date treatment. Special attention to aged and chronic cases. Also, persons needing rest cures after strenuous attention to business or social cares find our mountain air bracing and invigorating. Fruit, vegetables and pure Holstein milk raised on the place, always fresh and abundant. Rates from $25.00 up. Special ratss for long term patients.

For references we point with pleasure to our past record, and by permission to

John Staige Davis, M.D., University of Virgina.

Stephen H. Watts, M.D., University of Virginia.

Geo. Ben. Johnston, M D., Richmond, Virginia.

Wm. F. Drewry, M.D., Petersburg, Va.

And Rev. H. B. Lee, D.D.. Charlottesville, Va.

We solicit your patronage, and will endeavor to merit it in the future as in the past. Address,

D. M. TRICE, M.D.,
Resident Physician,
Box 398, Charlottesville, Va.
Long Distance 'Phone 149.

Dr. Braxton B. Lloyd, of Winston Salem, N. C. was married to Miss Emm Hance, of Newark, N. J., in December.

Dr. Lloyd is an Eye, Ear, Nose and Throat Specialist and is quite competent in his profession.

Dr. Isaac H. Faust, of Salisbury, N. C. died at his home on January the 21st. Heart failure was the immediate cause of his death.

He was sixty-five years old, and was graduated from the University of Nashville, Tenn, in 1896.

BOOK NOTICES.

The Medical Diseases of Children By T. R. C. Whipham, M.A., M.D., (Oxon.) M.R.C.P.. Physician to the Evelina Hospital for Sick Children; Assistant Physician and Physician-in-Charge of the Children's Department at the Prince of Wales' Hospital; Lecturer on Diseases of Children at the North-east London Post-Graduate College. With 67 Illustrations. London: University of London Press. Published for the University of London Press, Ltd., by Hodder & Stoughton and Henry Frowde.

This volume is divided into chapters with the following subjects: I, The Development of the Child; II, The Feeding of Healthy Children; III, Derangements of Nutrition; IV, Diseases Due to Faulty Nutrltion; V, Specific Infectious Diseases; VI, Pneumococcal Infections; VII, Tuberculous Infections; VIII, Rheumatic Infections; IX, Syphilis; X, Meningococcal and Other Infections; XI, Constitutional Diseases; XII, Diseases of the Alimentary System; XIII, Diseases of the Respiratory System; XIV, Diseases of the Circulatory System; XV, Diseases of the Spleen, Blood, and other Ductless Glands; XVI, Diseases of the Genito-Urinary System; XVII, Diseases of the Nervous System; XVIII, Diseases of the Bones and Muscles.

This volume is neatly bound and carefully indexed, and it is in every way quite attractive in appearance. The illustrations are especially good.

Transactions of the Eighteenth Annual Meeting of the American Laryngological, Rhinological and Otological Society, held in Philadelphia, Pa., May 13th, 14th and 15th, 1912. Published by the Society, 1912.

This society, established in 1896, has made wonderful progress. It now has connected with it some of the most eminent physicians of America.

This volume of transactions contains the report of the 1912 meeting, with its many interesting and valuable articles, many of which are thoroughly illustrated.

The volume is well bound, neatly printed, and its general make-up cannot be criticised.

Alma at Hadley Hall. By Louise M. Breitenbach: Illustrated by John Goss. Boston: L. C. Page & Co. 1912.

This is one of the most interesting and best of the novels of its kind recently published. In giving the history and character of this orphan girl, and how it is developed during her training in a boarding school, the author has handled the subject beautifully, and nothing could give more clearly a vision into real boarding school life.

The volume is neatly bound and the illustrations are unusually good.

Mechanical Vibration, Its Physiological Application in Therapeutics. By M. L. H. Arnold Snow, M.D., Author of "Mechanical Vibration and Its Therapeutic Application," Professor of Mechanical

Vibration Therapy in the New York School of Physical Therapeutics; Associate Editor of the Journal of Advanced Therapeutics; Late Assistant in Electro-Therapeutics and Diseases of the Nervous System in the New York Post Graduate Medical School, etc. Published by Scientific Authors' Publishing Co., 329 West 57th Street, New York. Price $3.50.

Dr. Arnold Snow's latest work on Mechanical Vibration with the indications and methods of employing it, takes up the subject in a thoroughly scientific manner with a consideration of all that pertains to its therapeutic uses. It will be noted by a review of the table of contents that the volume has included many recently discovered features referable to spinal stimulation in the treatment of cardio-vascular, respiratory and other affections.

This work is printed in a larger volume than the authors' previous work, comprising about 500 pages and 50 plates and illustrations. The work also contains many valuable tables and practical suggestions to assist the operator in the scientific employment of mechanical vibration.

Handbook of Diseases of the Rectum. By Louis J. Hirschman, M.D., President of the American Proctologic Society, Lecturer on Rectal Surgery and Clinical Professor of Proctology, Detroit College of Medicine. Revised and rewritten second edition. 338 pages. Royal Octavo —172 Illustrations—including four colored plates. Price, $4.00.

The first edition of Dr. Hirschman's book met with a hearty reception at the hands of the medical profession. The present edition has been entirely rewritten, forty new illustrations, including two colored plates, have been added, and the entire book has been reset. This is pre-eminently a book for the general practitioner. It is written in the hopes that this class of the medical profession will arouse themselves to the possibility of this line of work and not allow the charlatan and the advertising quack to take from them work which can be done by the legitimate practitioners of medicine. To that end special attention has been paid to office work in rectal diseases and the part that *local anesthesia* plays in this class of work.

Diseases of the Heart and Aorta. By Arthur Douglass Hirschfelder, M.D., Associate in Medicine, Johns Hopkins University. With an Introductory Note by Lewellys F. Baker, M.D., LL.D., Professor of Medicine, Johns Hopkins University. 344 Illustrations by the author. Second Edition. Philadelphia and London: J. B. Lippincott Company. Price $6.00.

This volume is divided into four parts as follows: Part I, General Considerations and Methods of Diagnosis; Part II, Diseased Conditions Due to Diffuse Pathological Processes; Part III, Diseased Conditions Due to Localized Lesions; Part IV, Functional Diseases Without Anatomical Lesion.

Many changes and additions have been made in this second volume. The electrocardiograph, which has now assumed a role of primary importance in physiology, pharmacology, and clinical observation, has been discussed in detail as to theory, construction and application.

Other drugs which have merited consideration have come into use, and the chapters and sections upon treatment have been considerably enlarged.

This volume is substantially bound, and shows the "Lippincott sign" of durability and attractiveness.

The Practical Medicine Series. Comprising ten Volumes of the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Gustavus P. Head, M.D., Professor of Laryngology and Rhinology, Chicago Post-Graduate Medical School. Charles L. Mix, A.M., M.D., Professor of Physical Diagnosis in the North-western University Medical School. Volume X. Nervous and Mental Diseases, Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Policlinic, Clinical Professor of Nervous Diseases in the North-western University Medical School; Ex-President Chicago Neurological Society. Peter Bassoe, M.D., Assistant Professor of Nervous and Mental Diseases, Rush Medical College. Series 1912. Chicago: The Year Book Publishers, 180 N. Dearborn Street.

This volume is very similar to former volumes of this series in appearance. It is quite up-to-date in its subject matter—giving all the newer methods of the treatment of nervous and mental diseases.

Specific Diagnosis and Medication. By the late John M. Scudder, M.D. 12th edition reprinted. 12 mo., 819 pp. Cloth $3.00. John K. Scudder, publisher, 630 W. 6th St., Cincinnati, Ohio.

In presenting this volume to the profession, the author's object has been to make a study of the prominent expressions of disease, with reference to the administration of remedies.

The work shows a great deal of thought and practical application. It will be of value to the profession, and we are glad to have the privilege of recommending it to our readers.

A Manual of Elementary Zoology. By L. A. Bornadaile, M.A., Lecturer in Zoology in the University of Cambridge and in Natural Sciences at Selwyn College. London: Henry Frowde, Oxford University Press; Hodder & Stoughton, Warwick Square, E. C.

Animals which are most often studied in Elementary Zoology are treated of in this volume, such as: the frog, the crayfish, the swan, the mussel, the dogfish, the pigeon, the rabbit, etc. These are studied from a theoretical standpoint. One great principle that has guided the author is—that the organism should be regarded as a whole. This volume is neatly and attractively bound, and contains much valuable information.

Surgical Operations with Local Anesthesia. By Arthur E. Hertzler, M.D., Surgeon to the Halstead Hospital, Halstead Kansas, and to the Sweedish Hospital, Kansas City, Mo. Surgery Publishing Co., 92 William Street, New York, 1912. Price $2.00.

The object of this book is to furnish in a convenient form the technic of some of the commoner operations that can be done in a satisfactory manner under local anesthesia. The author has kept in mind the needs of the general practitioner and the surgeon who works without the advantages which accessibility to a hospital affords.

For this reason, operations have been omitted which require considerable experience in the use of local anesthetics.

This volume will no doubt fill a much needed place in medical literature. Its binding is neat and attractive.

Napoleon's Campaign in Russia Anno 1812. Medico-Historical. By Dr. A. Rose. With illustrations. Published by The Author, 173 Lexington Ave., New York, 1913.

There is no campaign in the history of the world which has left such a deep impression upon the hearts of the people as that of Napoleon in Russia, Anno 1812.

There is a medical history of the hundreds of thousands who have perished Anno 1812 in Russia from cold, hunger, fatigue or misery.

Such medical history cannot be intelligible without some details of the history of events causing and surrounding the deaths. Such history, the author of this volume has attempted to give us.

The volume is nicely bound, and shows no lack of pains on the part of the publishers.

An Increasingly Popular Magazine.

The March issue of Lippincott's keeps the pace set by recent numbers, which have been geiting no end of praise. The complete novelette is by Edgar Jepson, whose "Pollyooly and the Lump" has proved so popular. It is entitled "The Changeable Professor," and in it are adroitly commingled both farce and melodrama, as in one of the big theatrical successes of the present season. The Professor is a scientist whose arduous labors have injured his health, apparently beyond repair. But he discovers a strange cure for his malady, and lives to confound his brother scientists and to win the girl he loves—and she's well worth the winning. Vivisection—or something akin to it—plays an important part in the narrative, which "gets busy" from the start, and is never permitted to lag.

The short stories are a varied lot. "What There Was of It" is by Anne Warwick; "A False Aurora," by Alice MacGowan and Caroline Wood Morrison; "Held Up," by Thomas L. Masson; "The Vacant Forty," by Paul Lee Ellerbe; "The Little House," by Annette Thackwell Johnson; "The Strategy of Hezekiah John," by Clara Odell Lyon; and "Auntie Jane's Reminiscences," by Dr. Charles C. Abbott. The "Short-Story Master-piece" is "The Snow-Storm," by Alexander Pushkin, the wonderful Russian writer. As usual, there is an introduction by the editor.

The leading article is "A Foremost American Lyrist," being an appreciation of the remarkable poetical work of Mrs. Florence Earle Coates, by William Stanley Braithwaite. "The Investor and the Gold Supply," by Edward Sherwood Mead, Ph.D., gives some important information to all who own or hope to own property of any kind. Brief, pertinent papers in the department "Ways of the Hour" are as follows: "An Important Operatic Trend," by Robert Grau; "P. S.," by W. P., "The Dancers," by Minna Thomas Antrim; and "Caviar on Impulse," by Helen Coale Crew. "The Goose That Laid Golden Eggs" is an amusing sketch by Ellis O. Jones.

There are excellent verses by Marguerite O. B. Wilkinson, Harvey M. Watts, George Platt Waller, Jr., Mahlon Leonard Fisher, Richard Kirk, Arthur Wallace Peach, and others. William J. Burtscher contributes some clever epigrams under the heading "Everyday Philosophy." Then there are sixteen pages of "Walnuts and Wine," as Lippincott's unique humorous department is called.

Abstracts of the Leading articles of the month.

Treatment of Morphinism.—Page (Bulletin medical) discusses the question of avoidance of distress during the withdrawal of morphine from the isolated patient. The Dr. lays especial emphasis on the psychic distress which the highly imaginative addicts suffer under these conditions; this demands relief even more than the coexisting physical distress. The chief remedy, he has found, is to keep the patient in total ignorance of the rapidity with which the morphine is being withdrawn, and of the dose given at any one time. Contrary to what one would expect, a morphine habitue, even of long standing, is unable to tell how great a reduction of dose is being made. In this way most patients can be brought down to injections of sterile water without knowing it for three or four days. During this time they still demand and are satisfied by their injections (of water), and they are thus spared the mental agony occurring at the time of complete withdrawal. Obviously, the total period required varies with different cases. Withdrawal is carried out as quickly as possible, but without setting any definite date. In thirty cases treated by the author, the minimal time required for complete withdrawal was four days, the maximal thirty-one days, and the average, from eight to eighteen days. Of these patients, twenty-two had been taking morphine for over two years; twenty-five took more than 0.6 gramme daily; fourteen took in addition other drugs, such as cocaine, ether, and chloral hydrate. Eighteen had not returned to morphine two years after being treated.

The physical distress attending withdrawal may be diminished by frequent purgation with sodium sulphate and baths, including light baths. Another good adjuvant is sparteine sulphate in hypodermic injections—especially during the last few days of withdrawal and after its completion. For sedative and hypnotic purposes the author uses ammonium valerate, bromides, and veronal in moderate doses, but only when the patient is really suffering.

Treatment of Aortic Aneurysm.—Pierret and Duhot (Echo medical du Nord) report three new cases of aneurysm in which an intravenous injection of 0.6 gramme of salvarsan brought prompt relief from previously continuous pain. In each of these cases the Wassermann reaction was positive, and in none did any untoward results follow. In one case the pain returned in three weeks, after a long walk, but was gradually again relieved by a series of twenty injections of benzoate of mercury In no instance was the size of the aneurysm, as shown by radiography, diminished by the treatment. They believe salvarsan to be without danger in aneurysms of moderate size, provided no other contraindicating lesions are present. The blood pressure is practically uninfluenced by the remedy, the tendency being rather toward a slight fall than a rise. Pain and dyspnea are relieved much more quickly than by mercury. In view of the undoubted efficacy of the latter agent and its more ready administration, however, Pierret and Duhot believe it should be reserved for cases in which daily mercurial injections and full doses of potassium iodide have failed to benefit.

Haemin and Haemochromogen Crystals as Tests for Blood.—Heine (Vrtljhrschr. f. gericht. Med. u. off. Sanitatswesen) comes to the conclusion that these tests are of practically equal value. The Dr. failed to get hæmochromogen crystals in two cases in which he got hæmin crystals, but in two others obtained hæmochromogen in which the latter could not be got or were so small as to be visible only with an oil-immersion lens. The presence of lime, e.g., in the case of blood-stains on cement or mortar, especially if exposed to varying weather conditions, was found to be exceedingly inimical to obtaining either variety of crystals, and in the presence of rust hæmochromogen in particular could only be obtained if the blood was in considerable excess and the stain one of recent origin.

The hæmochromogen crystal test is a simple one, and should certainly not be omitted in any case where the Teichmann hæmin test proves negative. The reagent recommended is a mixture of two parts of pyridin (purissimum, Merck) with three parts concentrated watery solution of hydrazin sulphate. A drop of this is added on a slide to a little of the suspected material, well broken up, a cover-glass put on, and the preparation gently heated until bubbles are appearing, It is then laid down on some non-conductor and allowed to cool gradually. With fluid blood or solutions of blood previous drying is unnecessary, as the reagent may be added to the liquid and treated in the same manner. Careful searching for the crystals is important, and sometimes the use of an oil-immersion lens is necessary. They appear as fine needles, which may be straight or bent, and are sometimes split at the ends. They may occur singly, crossed, or arranged in clumps or rosette form. They are doubly refracting, not strongly refractile, copper-red in color, with fairly marked pleochroism from

red-brown to orange-red.

Whisper Pectoriloquy.—Rist (La Presse Med.) says that listening over the lungs, while the patient counts in a whisper, is one of the most useful procedures in the examination of the lungs. A marked accentuation of the whisper over a circumscribed area may be considered the equivalent of bronchial breathing and bronchophony. It is, however, more easily recognized than these in certain doubtful cases, e.g., where bronchial breathing reaches the ear in admixture with the normal vesicular murmur, where it resembles the so-called 'harsh' respiration, or where its place of origin is deeply situated, as in the case of certain cavities, interlobar pleurisy, or central pneumonia. In these difficult cases bronchophony is likewise almost useless, being too loud and without differences of shading. Whispering pectoriloquy, on the other hand, allows of diagnosing the physical coudition underlying bronchial breathing, viz , consolidation, partial or complete, with great delicacy and precision. Care should obviously be taken to exclude direct transmission of the whispered voice to the ear through the air. It is also to be remembered that when listened for over areas normally yielding bronchial breathing, whispered pectoriloquy is without significance. Curiously, it is precisely in the two conditions in which it was formerly asserted to be pathognomonic, viz., serofibrinous pleurisy and involvement of the peribronchial glands, that the sign is untrustworthy or valueless.

Lipoids of the Ovary, Corpus Luteum, and Testicle.—Iscovesco (Presse med.) says that all living cells are formed of proteids, carbohydrates, and lipoids. Among the lipoids are neutral fats, phosphated lipoids, and non-phosphated lipoids. All the neutral fats are soluble in ether, petrol, acetone, chloroform, benzol, and boiling alcohol. Most of them are fatty liquids. These lipoids act like the internal secretions. The thyroid contains a whole series of lipoids. The author has studied one of the lipoids of the ovary soluble in oils, which he has injected into rabbits, and later tested therapeutically on man. Injected into rabbits it causes hypertrophy of the uterus and ovaries, accompanied by intense congestion, causing extravasations if very large doses are given. Injections of this lipoid have great power in women over hemorrhages; also in amenorrhea, painful dysmenorrhea, hypoovaria, castration, and troubles of the menopause. It is a tonic in senility, and lessens feebleness of age. In the chlorosis of puberty it has an excellent effect. A similar lipoid isolated from the testicles causes hypertrophy of the testicles in male animals. They become unsocial and fight each other murderously. It acts only on the male genital organs. If pushed too far it causes paraplegia which passes off after the congestion has ceased. In men who are hypochondriac, neurasthenic, complain of frigidity, and genital feebleness, and in old men it causes improvement in general strength, ability to work, and increase of sexual appetite, with diminution of arterial teaston. The specific lipoid of the corpus luteum increases postpuerperal involution, assists lactation, and lessens nausea and vomiting of pregnancy. There is an antagonism between the lipoids of the suprarenals and the corpus luteum. The author concludes that in every organ of the vertebrates there is a specific lipoid, which when introduced into the animal organism has the property of excitiug the function of that organ. Each is homo-stimulating and acts on the centers in the medulla which preside over that particular organ.

Pellidol and Azodol for the Treatment of Eczema with Tendency to Exudation.—Bantlin (Munch. med. Woch.) remarks that moist eczema in children constitutes one of the most vexatious and obstinate of ailments. Observations on the efficacy of scarlet red in promoting epithelial regeneration have induced Kalle & Do., Biebrich, to introduce into notice a related substance, more soluble in fats and oils and less toxic. This they have called Pellidol. According to Hayward the active constituent of scarlet red is amidoazotoluol, while pellidol is diazethyl o-amidoazotoluol. Azodol is a combination of pellidol with iodized albumen. A two to a four per cent. salve containing these seem, as far as observations at present go, equally efficacious. It was found that the injuries from burns rapidly healed under the use of this; also erythemata with marked shedding of epithelium quickly improved. Eczema in all stages—weeping, crusted, scaly, and dry—exhibited rapid retrogression of the symptoms. The oozing surfaces became dry, the crusts separated, the scaling diminished, while the troublesome itching daily abated. The mothers stated that the children, previously kept awake by the desire to scratch, now slept quietly as a result of the application of the ointment. The infiltration and induration of the corium, so constant a feature in long-standing eczema, lessened, and this perhaps explains the anti-pruritic action of the pellidol ointment. Recent cases improved most speedily; in chronic examples there sometimes were small recurrences, but these yielded to fresh applications of pellidol ointment. Bantlin is of opinion that pellidol is

efficacious in exudative eczema, and is suited for all ages, while it is relatively harmless.

Treatment of Typhoid Fever.—Hirtz (Quinzaine therapeutique) states that in a not inconsiderable number of typhoid cases it is inadvisable to try to secure a lowering of the temperature by strenuous administration of cold baths or packs. Often the purposes of the Brand method are best attained where strict adherence to its formal regulations is not attempted. Thus, in typhoid fever, especially early in its course, insomnia is frequently present. Although a certain proportion of patients can secure enough sleep in the twenty-four hours both by day and night, notwithstanding the interruptions for bathing, other patients can sleep only at night, some in the earlier night hours, the remainder principally toward morning, and in these regular bathing at night is likely to do harm. While giving the baths in the daytime, Hirtz therefore omits all night baths when the patient is asleep. Effects on the temperature are thus obtained which the classic procedure fails to procure. Often in the day or two following a night in which one or two baths have been omitted, the temperature curve is found to descent of a degree or more, which shows that a definite, though sometimes but temporary, favorable influence has been exerted on the febrile process itself. He modifies the Brand treatment by varying the temperature of the baths given according to the age and previous physical condition of the patient, as well as the apparent severity of the typhoid infection.

Treatment of Congenital Club-foot.—Savariaud (Presse med.) says that the surgeon who is treating club-foot should have at his disposal a series of means varying in accordance with the severity of the deformity, the social position of the child, and the amount of assistance to be expected from the mother or other persons surrounding him. Treatment should be begun as soon after birth as possible by daily replacing the parts under the direction of the physician. Between these replacements the foot should be kept in a normal position by some sort of apparatus. Later, to this treatment may be added, when needed, tenotomy and forced replacement under chloroform. After this, massage and apparatus are to be continued. In country children who will get less care operation on the bones may be done earlier; in the young child subcutaneous removal of the osseous nuclei from the bones, and in older children astragalectomy with cuneiform resection, may be done. Plaster apparatus must be applied at once. The patients operated on must never be lost sight of, lest we get bad results. This deformity is probably due to faulty position of the foot during intrauterine life, early in pregnancy. The result depends on the degree of the deformity, degree of reducibility, shape of the foot, age of child, and circumstances of life. A long flexible foot will give better results than a short stubby one.

On the Practical Results of the Recent Advances in the Diagnosis and Treatment of Syphilis.—Sequeira. (The London Lancet), presented an abstract of his paper before the Plymouth Medical Society, including a discussion of the laboratory diagnosis of syphilis, the technique, the value of the Wassermann reaction, the influence of treatment on the Wassermann reaction, and the present state of knowledge of the administration of salvarsan.

His conclusion are summarized as follow.

1. The early diagnosis of syphilis is of the utmost importance (a) to prevent the spread of the infection, and (b) for efficient treatment. Treatment should begin in the primary stage. There should be no waiting for secondaries.

2. A doubtful chancre should be examined for for spirochaetae. The dark background illumination method affords a reliable means provided the lesion has been untreated. Such an examination ought to be within the lesion has been untreated. Such an examination ought to be within the reach of all patients in the towns and might be arranged for by the health officer.

3. The Wassermann reaction is of the highest utility in the diagnosis of secondary and tertiary eruptions. If carried out by the improved technique, practically every secondary cass gives a positive reaction. The reaction is of value in determining and estimating the effect of treatment. The Wassermann reaction ought to be as much within the the reach of every patient as is the Widal reaction or the examination of diphtheria swabs.

4. Treatment by mercury is undoubtedly efficacious. Nearly every case is influenced. After eight or more courses of injections 21 per cent of the patients still have a positive Wassermann reaction. After two or more years' treatment by mercurial pills 30 per cent give a positive Wassermann reaction. In the latter case it is naturally extremely difficult to be sure that the patient takes the remedy.

5. As regards salvarsan the danger is not great in properly selected cases. With rigid precautions taken in the preparation of the injections and with an aseptic technique the intravenous method has many advantages. The use of redistilled saline eliminates the pyrexia, rigors, vomiting,

and other unpleasant symptoms in nearly every case.

6. The immediate effect of salvarsan, both on the clinic manifestations of the disease and on the Wassermann reaction, are far more rapid than are those of mercury. The ultimate effects in primary syphilis are remarkable; in early cases the secondary stage may be aborted. The effects in well-developed secondary syphilis are less striking and relapses certainly occur, and it remains for time to show the permanence of the results. In tertiary syphilis healing is extraordinarily rapid, but the Wassermann reaction is difficult to alter and relapses are likely to occur.

7. Everything points to the importance of early diagnosis and early treatment.

Combat Against Tuberculosis Among Children.—Nietner, in The London Lancet, emphasizes the fact that tuberculosis is a true children's disease. The lung is probably the usual primary area of infection. In its diagnosis a temperature record is of prime importance and should be taken every two to three hours. The x-ray is of value, especially for ihe detection of bronchial glandular involvement. Tuberculin tests are most useful. As preventive measures, the marriage of tuberculous women should be strongly discouraged and tuberculous mothers should not nurse their children. The only means of isolating tuberculous families which has proven not too expensive in Germany is the construction of one or two family houses. A pure milk supply is of great importance. Traveling tuberculosis exhibitions do much for popular enlightenment. Breast-feeding must be advocated. The baby should be kept away from the infected member of the family. Dangers which must be avoided are the use of the "comforter," the tasting of the first spoonful of food to encourage the child to eat or to test its temperature, the cleaning of the child's face with the parent's handkerchief or saliva, and kissing on the mouth. The danger from tuberculous teachers is probably exaggerated, but both teachers and scholars who eject tubercle bacilli should be excluded from school, pensioning the teachers meanwhile if necessary. A careful examination by the school physician is of the utmost importauce and this official should be a whole-time appointee with time to be thorough. The value of a school dentist is recognized in Germany, as 90 per cent. of children have affected teeth. Instruction regarding the prevention of infectious disease, particularly tuberculosis, together with lessons in general hygiene, should form an obligatory part of the school syllabus, and could best be incorporated with teaching in natural science. Such instruction is best administered by the school teachers, who should, however, be trained by the medical profession for this duty. School hygiene should include the furnishing of facilities for frequent shower baths, abolition of the common drinking cup, compulsory eversion of the head and covering of the mouth with a handkerchief when coughing, supply of spittoons, lightening of school work of children who show signs of latent tuberculosis and instruction in separate classes of children with open tuberculosis. The class work must be adjusted to the physical capacity of the children.

The Treatment of Eclampsia by Stroganoff's Method.—Holste (Monatschr. f. Geb. u. Gynak.) says that the symptomatic treatment of eclampsia must be followed and that no ideal results with any other methods are yet known. This uncertainty is laid to a frequent change in therapeutic procedures and therefore remedies have been abandoned or unfavorably criticized before their trial has been sufficiently complete. The Dr. considers that this applies particularly to the procedure advocated by Stroganoff, which he has followed in a series of fifteen personal cases with certain modifications. In severe cases of eclampsia where dilatation was not sufficiently complete, the introduction of a dilating bag was added to the narcotic treatment. In addition to this the patients were thoroughly protected from all external irritants, but no mention is made of any eliminative treatment. In two cases a venesection was done. He believes that some results will be obtained with the biological reactions applied during the prodromal stage, as certain relations undoubtedly exist between the serum of healthy pregnant women, or those convalescing from eclampsia, and individuals that present the early evidences of toxemia. Although the delivery of the patient seems to have a favorable influence on the disease process, the relation between eclampsia and labor is not the same as between a poison and its corresponding antidote. Therefore objection must be made to the claim proposed by Liepman and others, that vaginal Cesarean section is called for in certain cases just as the amputation of an affected limb is required. Holste believes that the essential point in the treatment of the condition is to expedite labor, but not to resort to rapid delivery such as the Cesarean section. The conservative treatment is therefore to be recommended, especially in general practice, until a better definition of the pathogenesis of the disease promises us more reliable results.

Extraperitoneal Cesarean Section.—Kustner (Munchen. med. Wchnschr.) says that as the most certain preventive against peritonitis is to avoid the entrance of germs into this cavity through an operative or other opening, therefore that form of Cesarean section is most efficient which obviates this possibility. He is an adherent of the method which was first brought out by Frank and Sellheim and believes that it is very unfortunate that this procedure should have been confounded with the deep cervical Cesarean section, because in the latter procedure the entrance of germs into the peritoneal cavity cannot be avoided with certainty. His experience now includes seventy-two cases, among which the indications included contracted pelves with other complications in the presence of a living child. There were four deaths among the children, three of which were due to a deep asphyxia and the other died after an interval of three days of meningeal hemorrhages. In some of these cases the child had already been subjected to prolonged labor after efforts at instrumental extraction. The writer says that no degree of infection on the part of the mother is a contraindication to this operation. Injuries to the bladder occurred in six instances (8 per cent.) which may be compared to a percentage of from 10 to 17 following pubiotomy. The writer considers that this will be less often reported in the future as the technic of the operation is improved. A well marked advantage which is attached to this procedure is the fact that a paralysis of the intestine is entirely excluded, as all handling of the gut is avoided. It has been claimed that the wound in the connective tissues which results is subject to infection, but Kustner denies this, and even where separation occurred a good result followed. The writer says that the operation is a difficult one and not to be compared in its execution with the ordinary Cesarean section. It can only be done under suitable conditions in a hospital, by those who are skilled in the method, but Kustner believes that this is fully compensated for by the results as regards the children. There were no fatalities among the mothers in his series of seventy-two cases, which could be traced directly to the operation. The Dr. reports one death in a very much deformed mother in whom this is attributed to the anesthetic. In view of the good results obtained from those who have thoroughly tested the procedure, Kustner believes that extraperitoneal Cesarean section will in the future occupy an important position in the treatment of labors in contracted pelves.

Spontaneous Torsion of the Normal Tube and Ovary.—Auvray (Arch. mens. d'obst. et de gyn.) says that there are various ways in which twisting of the normal tube may occur. A case observed by him, in a girl of fourteen years of age, was mistaken from its symptoms and location for an appendicitis. It was only at the operation that a twisted tube and ovary, previously normal, were found to be the cause of the acute symptoms, including pain, vomiting, and fever. The tube was twisted twice on itself. Such a case is very rare. Torsion generally occurs in the normal tube during gestation, or in the sac of a hernia. This latter form occurs only in very young children, from three to five years of age. The diagnosis is generally strangulated hernia. Yet the accident does not occur as rapidly as in strangulated hernia, the symptoms coming on gradually. The diagnosis is very difficult. Aside from pregnancy this accident is very rare in the normal tube. It also occurs in girls eleven to fourteen years of age. The twisting is generally near the junction with the uterus, and the mass is found in Douglas' cul-de-sac. Diagnosis has never been made in these cases. Torsion during gestation is rare. In one form of torsion no inflammatory fluid is found in the tube, but the latter is distended with blood, the weight of which will predispose it to twisting.

A New Reagent for Detecting Occult Blood.—Ruttan and Hardisty (Canad. Med. Assoc. Journ.) urge the claims of a new reagent for detecting occult blood. Of chemical tests suggested and employed, benzidin has proved the most satisfactory; but various objections have been urged against it, which the authors think are met by their new test. The substance used is tolidin or orthotolidin, a crystalline basic body of the aromatic series, very slightly soluble in water, easily soluble in alcohol and ether, and closely allied to toluidin and benzidin. The efficacy of this new reagent was proved against the usual chemical tests for blood in urine, fæces, and stomach contents—guaiacum, benzidin, and phenolphthalein. The relative delicacy of different reagents for blood in watery solution was as follows: Guaiacum detected blood in dilution of 1 to 50,000, benzidin 1 to 700,000, tolidin 1 to 7,000,000, and phenolphthal 1 to 10,000,000. Tolidin had a further advantage over guaiacum and benzidin in that the color—a green to blue-black depending on dilutions—though not developing so rapidly, lasted very much longer and increased in intensity with time.

Blood in Urine.—Guaiacum and benzidin detected blood in dilutions of 1 to 6000,

while tolidin detected it in dilutions of 1 to 24,000, giving a deep greenish blue color that lasted half an hour or more. Phenolphthalein detected blood only in dilutions of 1 to 2000. In fæces guaiacum showed blood in dilutions of 1 to 10,000, benzidin and tolidin 1 to 100,000, phenolphthalein 1 to 2000. In stomach contents guaiacum detected blood in dilutions of 1 to 5000, benzidin and tolidin in 1 to 30,000. The authors consider that their results demonstrate the superiority of tolidin for revealing occult blood. Benzidin, which at present is commonly used for clinical work, would seem to be as delicate as tolidin, but this only holds good for freshly prepared solutions. Even when only 24 hours old, benzidin loses 50 per cent. of its delicacy, while tolidin will remain unchanged for 3 ro 4 weeks. And again, when the blood to be detected is only in very small amount, the color reaction with tolidin gradually increases in intensity and persists much longer than with benzidin.

Toxic Origin of Hyperemesis Gravidarum.—Seitz (Deut med. Woch.) considers that the main cause of hyperemesis gravidarum is a toxic condition similar to that which produces eclampsia and acute yellow atrophy of the liver, and that the part played by psychic conditions and a host of local abnormalities—such as retroflexion, adhesions, erosions, and endometritis—has been much over-rated. The teaching of the psychic origin of hyperemesis, which the Ahlfeld-Kaltenbach school defended, was based on the observation that treatment by suggestion effected improvement and even recovery in many cases. But this teaching, which labels the vomiting of pregnancy as a mere expression of hysteria, fails to explain its frequency in mentally robust women without a taint of hysteria or other allied condition. Besides, this complication occurs in every other pregnancy, and sometimes ends in death, which is an unknown sequel to hysteria alone. The psychic teaching was seriously challenged in 1892, when Lindemann demonstrated the gross anatomical lesions present in cases which terminated fatally. Subsequently, English and American workers have recorded similar observations, and more recently Seitz attended a case which ended fatally in spite of the induction of abortion two days earlier. The necropsy showed that the organ most seriously involved was the liver, in which parenchymatous and fatty degeneration, and infiltration with necrosis of the hepatic cells, were observed. The kidneys also showed necrosis and changes characteristic of acute parenchymatous nephritis. Such changes, which must clearly be independent of purely nervous factors, resemble in many respects those which poisoning with phosphorous or chloroform causes. They also resemble the changes observed in acute yellow atrophy of the liver and eclampsia. Now, from one-third to a half of the number of patients suffering from the former disease are pregnant and their livers show marked diminution in volume and fatty degeneration or complete necrosis of the acini. Both in this disease and in hyperemesis gravidarum there are cerebral disturbances, such as excitation and delirium. Cutaneous hæmorrhages and jaundice are also common to both, but while the latter is usually slight in hyperemesis gravidaram, it is, as a rule, severe in acute yellow atrophy of the liver. There may also be several other minor differences noticeable, yet the pathological changes are often so much alike in these diseases that they are scarcely distinguishable from each other. The number of cases of hyperemesis gravidarum which are so severe as to resemble cases of acute yellow atrophy of the liver are far commoner than the scanty observations on this matter would suggest. Hyperemesis gravidarum, again, resembles certain forms of eclampsia, with the severe forms of which slight jaundice is frequently associated. In eclampsia, too, the liver is often tender, the necropsy showing extensive hepatic disease. The association of hyperemesis gravidarum with such conditions as jaundice, hæmoglobinæmia, neuritis, ptyalism, purpura, and small multiple hæmorrhages into the tissues, is also indicative of a toxic state. Further, it is evident, if the fatal cases of hyperemesis gravidarum show extensive disease of the tiver, kidneys, and other organs, that the slighter forms are also accompanied by similar changes which are less marked, and from which the patient accordingly recovers. The writer points to the success achieved by the treatment of hyperemesis gravidarum with intravenous injections of serum drawn from healthy women, and he argues that this is a further proof of the toxic origin of the disease. He admits, however, that psychic influences may play a subsidiary part, and that treatment by suggestion may cure slight cases, for the sensitiveness of the vomiting centre to suggestion can be demonstrated by provoking nausea with the aid of distasteful conversation. But psychic influences alone seldom or never cause hyperemesis in the violent form sometimes seen in pregnancy. As small quantities of apomorphine injected subcutaneously irritate the vomiting centre, so do the unknown chemical bodies formed in the course of pregnancy, and in both cases the sensitiveness of the vomiting centre is sufficiently increased for psychic and

other minor factors to precipitate an attack of vomiting.—British Medical Journal.

Treatment of the Excessive Vomiting of Pregnancy.—Martin (The British Medical Journal). While the writer was senior house surgeon in the Glasgow Maternity and Woman's Hospital 17 cases of the excessive vomiting of pregnancy were admitted. All the patients had for several weeks been treated with the usual "stomach drugs," and in two cases rectal feeding had been tried without improvement. One patient was admitted very ill and died. She could retain nutriment neither by the mouth nor the rectum.

The history was carefully gone into. A thorough examination was made, particular attention being paid to the alimentary canal, vagina, uterus, and appendages. Bad teeth and chronic constipation were found associated in every case.

The patient was strictly confined to bed. The stomach was washed out thoroughly with warm water at a temperature of 100°. The large quantity of mucus obtained was surprising. Sips of cold water were allowed that night, and an enema of soap and water was administered. For several days the patients were put on peptonized milk and milk and soda, and were thereafter given little diet. The patients were not allowed up until they had been on light diet for two days. A powder containing 1 grain of mercury—with chalk and 3 of sodium bicarbonate was given thrice daily. For chronic constipation, in conjunction with the above powder, magnesium sulphate in hot water every second morning proved the best aperient. If a satisfactory motion was not obtained, then a soap and water enema was given. For the septic condition of the mouth a wash of carbolic acid solution 1 to 80 was used frequently and always immediately before and immediately after food.

This treatment was quite successful in the 16 cases, the average duration of residence in the hsspital being 17 days. One patient was treated for about 10 days with the text book drugs without improvement. She was then treated as above and at once improved. She had no return of vomiting and went to term. In another case there was retroversion of the uterus with tendency to prolapse; the uterus was not interferred with and she made a complete recovery. In 5 cases there was a well marked acetone odor.

The Blood Pressure in Early Phthisis.—Spengel (Wien. klin. Rund.) gives the results of his studies on blood pressure in the early stages of phthisis. The Dr. recommends Gartner's tonometer in preference to any other instrument; and he takes as the normal average blood pressure in a healthy person a column of mercury 90 to 105 mm. in height. He agrees with Igersheimer in condemning Turban's classification in phthisis, considering that it is not on the extent of lung involved, but on the intensity of the infection that the lowering of blood pressure and also the prognosis depend. A prolonged examination of fifty patients, all in an early stage of phthisis, convinced him that even at the commencement of the disease the blood pressure is constantly lowered. The mean of many observations showed an average pressure of from 57 to 87 mm., subject to daily variations of 10 to 35 mm., from disturbances due to meals, emotion, fatigue, etc. These daily variations are greater than they would be in health, and different in character. Thus, whereas in a healthy person the effect of a meal is to raise the blood pressure, the writer found that in his phthisical patients the pressure was thereby lowered. The normal effect of exercise, according to numerous observers, is to lower the blood pressure, although great fatigue is found to raise it; but in phthisis the author found the reverse to be the case—that is, both exercise and emotional excitement produced a rise in pressure, unless they induced fatigue, in which case a fall was noticed. Coughing produces a very marked temporary rise in pressure. Concomitantly with the lowering of the arterial pressure there is an acceleration of the pulse-rate, and these two phenomena become more marked as the disease advances. A rise of pressure in the course of the disease may therefore be regarded as of good omen in prognosis. The author found a higher average pressure in women than in men, and in young patients than in old. As to the cause of this lowering of pressure, the author refers to the fact that the heart is often abnormally small in phthisis, and is sometimes affected by "brown atrophy," but he does not attribute the disturbance in the circulation to this. The Dr. agrees rather with Burkhardt, who considers the tuberculous virus to be responsible both for the acceleration of the pulse and for the degeneration of the heart muscle; and with Geisbock, who found in a series of cases that, after an injection of old tuberculin, the pressure fell sometimes as much as 40 mm. of mercury, whether the temperature was raised by the injection or not.

Paralysis Agitans and Parturition.—Bonnet-Laborderie (Bull. de la Soc. l'Obstet. et de Gyn. de Paris) says that as Parkinson's disease, or paralysis agitans, is a disorder of elderly subjects, and represents impaired vitality and grave constitu-

tional lesions, it is rarely associated with conception and pregnancy. He reports a typical case under observation in the Maternity Hospital, Lille, a patient of Delassus. She was a single woman, aged 41, subject for over four years to Parkinson's disease which had assumed an aggravated form. Gestation proceeded naturally, with but little nausea and vomiting; yet it was the first pregnancy, and there was no history of pelvic disease. On the other hand, the nervous disorder was grave. The patient was reduced to impotence; she had to be dressed and fed, she could only walk a few steps, and her speech was hardly intelligible, yet the mental condition was almost normal; her replies to questions, when they could be understood, were found to be sensible and precise. The nerve disorder grew perceptibly worse. Delivery occurred at term. After a few painless contractions the membranes ruptured spontaneously. Then they grew less and less. The pelvis was capacious, the vertex presented in the right occipito-anterior position. No less than five days after the rupture of the membranes the pains came on again, and they grew strong and frequent, and the patient, aroused from her habitual torpor, bore down vigorously. She even had to be warned against straining too much. After the pain had continued for eleven hours and a half, a living male fetus was expelled, over 7¼ lb. in weight, and 19¾ in. in length. The placenta followed spontaneously twenty minutes later; it weighed 460 grams, or just over 1 lb. The puerperium was uncomplicated, but hardly a drop of milk was secreted by the mammæ. The child left the maternity hospital in good health. Bonnet-Laborderie observes that although this senile primipara was subject to a formidable nervous disease already advanced, and though the waters came away early, this first delivery was quite unlike what might have been expected. It resembled the labor of a vigorous, physically brave young woman. She contracted her abdominal muscles actively during the final pains. Thus in paralysis agitans there is no true paralysis or paresis of the muscles. Voluntary movements can be effected whenever the patient chooses to make a sufficient effort.

Appendicitis in Children.—Mitchell (British Journal Children's Diseases) mentions a series of 40 consecutive hospital cases, in which the initial treatment varied greatly. All were subjected to surgical treatmdnt finally. The age varied between 14 months and 13 years, the average duration of illness being five days. Nausea and vomiting were not prominent symptoms, though abdominal tenderness and rigidity were present in every case at some time of the illness. A definite previous attack occurred in six cases, though there was a history of stomache in a much larger proportion. Four main groups were noted. (1) In nine cases a large walled-off abscess impinged directly on the abdominal wall. There were three deaths due respectively to septic peritonitis, intestinal obstruction, and exhaustion. Of the recoveries, five needed some further operation for the removal of the appendix or cure of a ventral hernia. (2) Five cases showed localized abscess, only reached after opening the peritoneal cavity. One death occurred seven days after a second operation for subphrenic abscess. (3) Eigvteen cases showed a spreading diffuse peritonitis, with gangrenous appendix in all but one case. Six deaths occurred, three within 24 hours of operation. Operation for ventral hernia was needed in several of the recoveries. (4) Eight cases showed a gangrenous appendix without peritonitis. There were no deaths, and in these the average duration of illness before operation was under 24 hours. In all, there were 40 cases, with 10 deaths, a mortality of 25 per cent., while in all cases operated on during the acute stage before infection had visibly extended beyond the appendix and its peritoneum, the mortality was nil. A simple enema was given before operation, salines with glucose and bicarbonate of soda continuously every two or three hours for 24 hours after. The affected area was well packed off, free pus mopped away, the appendix removed, and drainage employed in all but one case. He concludes that appendicitis in children is a dangerous condition, and deceptive because the stage of the disease is hard to determine. Cases in the catarrhal stage often recover without operation, but after a certain point the disease advances rapidly and often kills. Localized abscess is very dangerous in infants especially. Children are bad subjects for acute septic peritoneal infections, owing to the high position of the appendix in the abdomen; peritonitis is often diffuse from first, Early diagnosis is everything.

The Oxygen Bath in House Practice.—Baediker (Therapie d. Gegenwart) concludes from his experience that patients with neurasthenia or heart affections can be treated balneologically at home, thus avoiding the necessity of sending them to expensive watering places. The table which he appends shows the O bath's effect on the pulse rate and force, radial blood pressure, nature of cardiac sounds, heart limits, and depth and rate of respiration.

The most important result is the lowering

of high blood pressure. In persons with normal or low blood pressure, the changes were insignificant. Where the blood pressure was materially reduced, the heart limits contracted also; they approximated transversely by 1 to 2 cm. The heart dimensions were not perceptibly altered when the blood pressure remained unchanged. Pulse rate was lessened and the respiration improved in rate and quality whenever the vascular tension was lowered.

These and the other effect persist only a few hours after the first bath. But after an average of fifteen to twenty baths, very prolonged and even permanent physiological and therapeutic effects were evident. In an arteriosclerotic, marked cardiac improvement was apporent, and the redness of the sclerae disappeared, the patient becoming tranquil and invigorated. In a climacteric case, the menorrhagia was remarkably influenced, and the patient's sleeplessness vanished upon the cessation of the aural pulsation, obviating the need of hypnotics. Good effects were also seen in intercostal and subscapular neuralgias, bronchial asthma, &c.

The oxygen bath proved useful even in cases with practically normal blood pressure, particularly neuralgia and insomnia. But it is counter-indicated where vascular tension is far below normal, particularly where there are also mitral defects or dangerous anæmia. The great mass of neurasthenics and cardioneurotics are especially benefited. The bath appears to be almost a specific in insomnia and bronchial asthma. Aortic insufficiency is a better indication than mitral defect. The bath improves the prognosis in Basedow's disease, and in arteriosclerosis when there is no coronary sclerosis or secondary low blood pressure.

He advocates that the O bath be given in the forenoon, when nervous vitality is not at ebb. A small liquid repast may be taken after it, and then the patient should rest for an hour or two; sleep is not essential, but should not be resisted. No very long walks should be permitted on bath days. He also had success with patients who could not take the bath before 6 p. m., but does not advise its use late at night, even in treating wakefulness. The duration of the bath is ten to twelve minutes, increased each time by two minutes up to twenty-five. Sensitive persons need not exceed fifteen minutes. Temperature should be 90° to 95° F. A course consists of about twenty-five baths, with occasional intermissions.

Beitrage zur Lehre von Glaukom.—Gilbert (Archiv. fur Ophthalmologie) brings out two points of general interest for every practitioner. The first is the effect of bleeding on the intraocular pressure and its role in the treatment of glaucoma, the other is the trial of an explanation for the cases of rapidly decreasing vision after normalization of the intraocular tension.

The bleeding after Dyes (3-4 gr. pro. kgr. bodyweight) is being done in most of the patients under the author's care. It is always followed by a diminution of the blood pressure and at the same time of the intraocular pressure. The intraocular pressure begins to decrease after 6 to 12 hours and remains low for 2 to 3 days. The decrease may amount to 20 to 30 mm. Hg.

The effect of the bleeding passes away too quickly and the venesection cannot be repeated frequently enough to establish bleeding as the only treatment in glaucoma. The author recommends it: (1) in the prodromal stage. Here it may suffice to cure the glaucoma. If there are relapses it can be repeated every six months. (2) In glaucoma simplex, if the patient refuses operation. Furthermore after glaucoma operations if they failed to arrest further progress. (3) Before operations, in order to diminish intraocular pressure for the moment of the operation. It is known that disastrous consequences may arise from sudden diminution of high intraocular pressure, such as hemorrhages, dislocation of the lens and so on. The bleeding should be done in simple glaucoma 6 to 24, in inflammatory glaucoma 12 to 36 hours before the operation.

The author furthermore deals with the fact well known to every oculist that sometimes after a well done glaucoma operation with normal recovery and normalized intraocular tension the vision decreases more or less considerably. He quotes a series of instances for this unfavorable outcome which is met with after iridectomy as well as after Lagranges' and Holths' operation, after cyclodialysis and after trephining. The only essential point is that the intraocular pressure is reduced to the normal rapidly and permanently. The diminution of function may arrive immediately or some weeks after the operation. This is observed nearly exclusively in cases of simple glaucoma with contracted field or reduced vision and high pressure.

The author suggests that this event may depend upon the presence of Schnabels' cavernes in the optic nerve. Small bundles only of nerve fibers pass between these cavernes and maintain the function of the eye. Changes of the circulation as they arrive with the decrease of intraocular tension and may be capable to cause a downbreak of these cavernes and to destroy the few fibres left in the walls of these cavernes. The author has observed the same occur-

rence after the very powerful medicinal treatment of glaucoma after Arlt (pilocarpin and dionin in substance). The vision decreased within a few days from 6-30 to counting fingers in 1-2 m.

Salvarsan in Pernicious Anaemia.—Hobhouse (British Medical Journal). Salvarsan, 0.3 gm., was injected intramuscularly in the case of a woman suffering from typical pernicious anæmia with daily fever about 101° F. 38.3° C. This was followed by a rapid fall of temperature, which the author thinks suggests the destruction of some virus. A fortnight later a similar dose was given, but this was followed by a rather severe general reaction, possibly due to hypersensitization. The blood changes were striking, especially with regard to the increase of the red blood corpuscles and the increased percentage of hæmoglobin. The author thinks that a second dose should be postponed so long as improvement is evident, and he also believes that this treatment should have a trial in all cases in spite of the fact that failures have been recorded.

Aspirin in Pneumonia.—Scott (Guy's Hosp. Gaz.) says that he has found, in eight cases of pneumonia, that aspirin (acetyl-salicylic acid) given at once, and repeated every few hours, causes a remarkable cessation of the disease. In no case did the disease last more than forty-eight hours, and in most cases the diagnosis was supported by examination of the sputum. A dose (usually 15 grains) of aspirin was given at once, and repeated as required by a further rise of temperature. The author offers no explanation of its action, but he points out that in all cases he was called in at the very onset, and that he cannot say what might have been the result had the disease got twenty-four hours' start.

Salvarsan in Locomotor Ataxy.—Ord (British Medical Journal) says that two middle aged males with typical locomotor ataxy received salvarsan treatment. In case 1 two injections of 0.3 gm. of salvarsan were given. In case 2 three injections of 0.5 gm. of neosalvarsan were administered. The results were prompt and remarkable, and both patients, who were previously incapacitated from work, have been able to resume their duties.

Extermination of Pediculi capitis.—Whitfield, in The London Lancet, gives a simple and rapid method for exterminating Pediculi capitis, particularly serviceable in the case of female children. The patient is laid on her back on the bed with the head over the edge, a basin placed on a chair underneath receiving the hair. A solution of carbolic acid (1:40) is then poured over the hair and sluiced back and forwards until the whole of the hair is thoroughly soaked. Particular attention must be given to the hair over the ears and at the nape of the neck. This sluicing is carried out for ten minutes; the hair is then drained, but not dried, tied up in a thick towel or piece of flannel after the manner of a turban, and allowed to remain like this for an hour. It can then be washed or allowed to dry. By this process every pediculus and every ovum is killed, and no relapse will take place unless exposed to fresh contagion. Impetiginous scabs, if present, may be dressed with a suitable ointment. With children of 5 years and over this treatment is perfectly safe, and the hair is in no way damaged.

Salvarsan in Diseases of the Eye—Stephenson (British Med. Jour.) discusses the action of salvarsan in syphilitic diseases of the eye. The remedy is best given in series by the intravenous route, and it should be supplemented by mercurial inunctions. He does not believe that it has any harmful effect upon the optic nerve, healthy or diseased. Its administration does not of necessity prevent the subsequent appearance of syphilitic disease of the eye. In the treatment of interstitial keratitis due to inherited syphilis, good results may be obtained by a series of injections, but a single injection seldom produces any marked effect. Salvarsan acts better and more speedily than mercury in the irido-cyclitis of secondary syphilis. The author considers that the serum reaction should throughout remain the touchstone as to the efficacy of treatment and the permanence of cure. The continued absence of clinical manifestations has less value.

Infantilism with Chronic Interstitial Nephritis.—Naish (The British Journal of Children's Diseases) says that recently attention has been drawn to the association of infantilism with albuminuria, polyuria, and polydipsia. Some have expressed the opinion that these cases were examples of diabetes insipidus with functional albuminuria. Dr. Parsons and Dr. Lyon have each reported a case of infantilism which came to autopsy in which there was marked renal fibrosis. The author in this article reports two cases that came under his observation during the past year in which the autopsy showed a marked chronic nephritis. In one case there was albumen and casts; in the other at the time of admission to the hospital the urine examination was negative. This case later developed albuminuria. In both cases the past history pointed to a disturbance of the function of the kid-

ney. They were thirsty, they excreted an excessive amount of urine, and in one case there had been several attacks of suppression of urine. They both died with uremic symptoms. The heart showed a moderate hypertrophy in both instances.

He has collected eight cases showing the relationship of infantilism with polyuria and polydipsia. In all but one albuminuria was shown to be present at some time, in five out of the eight rickets was present, and in four the rickets was of late onset; all of those that came to autopsy (four) showed marked fibrosis of the kidneys.

The Anatomy and Operative Technic of the Levator Fascia.—Martin (Arch. f. Gynak.) discusses the shortcomings of the usual methods of operating for perineal lacerations. The Dr. says that it is necessary to restore the fascial planes at the pelvic outlet just as we would repair a wound in the abdominal wall, because the muscles themselves exercise no supporting effect in this direction. The method in use at the Frauenklinik of the University of Berlin has been developed as follows: A U-shaped incision is made directly under the posterior commissure extending up on both sides into the lesser labia. This flap of skin and mucous membrane is then separated from the tissues underneath and the perineal body with the adjacent segments of the urogenital diaphragm is exposed. The finger is then used to dissect away the tissues until the fascial covering of the levator ani muscle is exposed. Sutures are then carried in from the edge of the urogenital diaphragm including the levator and its fascia, back through the former and out at the opposite side. The rectum thus remains untouched. The wound in the skin is then closed after removing the superabundant tissue. The advantages of the operation are stated to be as follows: During the procedure the various components of the pelvic floor are thoroughly exposed without the production of much hemorrhage because the larger vessels of the perineum and vagina are not touched. The chances of infection are likewise lessened because no hollow spaces remain. The fascial structure of this region is restored to its proper physiological proportions. The author recommends this operation in all cases of descent and prolapse of the posterior vaginal wall and as a complimentary operation in the treatment of displacements of the bladder and uterus.

Malignant Degeneration of Uterine Myomata.—Hertel (Monatschr. f. Geb. u. Gynak.). The Dr. says that recent observations have shown that myomata cannot be regarded as benign tumors. Hertel reports a series of 1100 cases of myoma which came under his observation, among which 468 were operated upon, 176 treated conservatively, and 456 were not treated for various reasons. In twenty-nine instances out of the 468 tumors removed, malignant degeneration was present. In sixteen the uterine mucosa and in thirteen the muscular structures were involved. Moreover in this entire series, carcinoma of the cervix was found in eight cases. Sarcomatous degeneration was observed in thirteen of the women operated upon, and in no instance was it possible to make a diagnosis beforehand. In the majority of cases the submucous form of myoma underwent degeneration, as this is most likely to be subjected to irritation. The Dr. says that the frequency of malignant degeneration demands operative rather than conservative treatment in all cases and that careful observation and early operation will furnish the most favorable results.

Notes on a Case of Precocious Development in a Boy, Aged Six Years.—Williams (The British Journal of Children's Disease) mentions the case of a boy of six years old because the parents noticed that during the past six months he was developing quickly. He had a slight moustache, and a deep voice, like an adult's. Muscles and trunk were well developed; and he could lift heavy weights. His intellect and movements were slow. Some inclination to knock-knee; and the tibiæ were slightly curved. There was an abundance of pubic hair; no axillary hair; external genitals fully developed. Otherwise the physical examination was negative. There was no sugar or albumin in the urine. Six months later there was increase of weight to 5 stones 5 lbs. 5 oz. (normal 3 st. 2½ lbs.); and according to skiagram advanced ossification of the small bones.

There have been about 22 cases of sex abnormalities in children with autopsies, which showed that the condition was associated with adrenal hypernephromata. Hypernephromata in children tend to grow slowly and do not all tend to be disseminated. There have been still other cases reported of precocity in children in connection with the pineal gland. There is some evidence in support of enlargement of the pituitary body in this case.

The Cutaneous Reaction to Tuberculin in Childhood.—Lapage (The British Journal of Children's Diseases) finds that children attending a hospital show evidence of tuberculous infection in 32 per cent. of the cases up to the age of two years, in 51.2 per cent. from two to five years, in 60 per cent. from five to ten years, and in 60.8 per

cent. from ten to fourteen years. Even in cases negative to clinical examination, infection occurs in 14.7 per cent. up to the age of two years, in 31.4 per cent. from two to five years, in 30.7 per cent. from five to ten years, and in 51.2 per cent. from ten to fourteen years. "In other words tuberculous infection is common in early life, increases rapidly in frequency up to the age of ten years, and then increases steadily but less rapidly, until at the end of school age at least 60 per cent. of children have become infected. Even in cases negative to clinical examination about 50 per cent. have become infected.

Miscellaneous.

State Board Examination Questions of Arkansas.

ANATOMY.

1. Name the bones of the face, describing the inferior maxillary.
2. Describe the shoulder-joint.
3. Describe the patella, giving muscular and tendinous attachments.
4. Give origin and insertion of trapezius muscle with nerve and blood-supply.
5. Name the parts severed in amputation of leg 4 inches below knee.
6. Give the anatomic divisions of the alimentary canal.
7. Give name and course of vein involved in varicose veins of leg.
8. Describe the circle of Willis.
9. Describe the rectum, giving nerve and blood supply.
10. Give origin and distribution of pneumogastric nerve.

PHYSIOLOGY.

1. Describe a red blood-corpuscle and tell of its functions.
2. Describe a white blood-corpuscle and tell of its functions.
3. Describe the fetal circulation.
4. Describe the circulation through the heart and lungs.
5. Describe a cross-section of the spinal cord in the mid-dorsal region.
6. Describe the fifth cranial nerve.
7. Describe the large intestine and tell of its functions.
8. Name all the known functions of the liver.
9. Describe the kidneys and tell of their functions.
10. Describe the skin and tell of its functions.

CHEMISTRY.

1. Give names and symbols of elements in halogen group, stating why so called.
2. Name three alkaloids of opium most used in medicine, giving dose of each.
3. Give test for strychnine and treatment for an over-dose.
4. How is potassium iodide made? Give formula.
5. Give chemical formula of lunar caustic, naming antidote.
6. Give chemical composition of urine, stating normal amount of urea excreted in twenty four hours.
7. What are the enzymes? Give their functions.
8. What are proteins and from what are they developed?
9. What is pyroxilin and how produced?
10. Complete the following formula: NaNo, plus H_2SO_4=?

MATERIA MEDICA.

1. Define an aperient and give an example.
2. Define a vascular contractor and state uses.
3. Define a vascular dilator and state what drug you consider the most valuable as such.
4. Define a solvent and excipient and give an example of each.
5. What is meant by the physiological effect of a drug?
6. Name and give dose of the most powerful hydragogue cathartic.
7. Name the three most used preparations of opium, and state how much of each represents 1 grain of opium.
8. Give primary and secondary effects of carbolic acid when locally applied.
9. What change takes place in morphine after having been kept for some time in solution?
10. Name the principal remedy used to promote the absorption of morbid products.

THERAPEUTICS.

1. Differentiate between materia medica and therapeutics.
2. Differentiate between empirical and rational therapeutics.
3. What is meant by suggestive therapeutics?
4. Name a remedy that is especially indicated in the stage of resolution of pneumonia.
5. Name objective and subjective symptoms of phenol poisoning.
6. How would you treat such a case?
7. Name an antidote for each of the following, and state whether this is physiological or chemical: arsenic, opium, copper, and strychnine.
8. What therapeutic agent liberates formaldehyde in the urine? State in what

class of cases it is indicated.

9. In case of sudden collapse, name the quickest and most efficient remedy, and give its mode of administration.

10. Describe the technique in the administration of anti meningitis serum.

PATHOLOGY.

1. Define gangrene and name varieties.

2. Describe briefly the changes which take place in atrophy and those which occur in degeneration.

3. What are usual methods of metastatic extension of sarcoma and carcinoma?

4. What conditions are most commonly accompanied with increased blood pressure and what are the results if this increased pressure is maintained for a considerable time?

5. State briefly the pathologic changes found in pellagra.

6. State briefly the changes that take place in the entire organism as a result of chronic nephritis.

7. What are the principal parts involved in acute anterior poliomyelitis?

8. What are the most common pathologic conditions found in scarlet fever?

9. Give the pathology of chronic gastritis.

10. Give pathology of scorbutus.

Toilet and Cosmetic Powders.

The custom of powdering the face is one of old standing and at the present day seems increasingly popular. It is asserted that by the employment of powder the face is protected from heat and cold, moisture is thereby absorbed, greasiness abolished, while under it abrasions heal. But a still more important point in the estimation of many who use it is that thus defects in transparency of complexion are mitigated while blackheads, scars, and small pustules are concealed. The cosmetic properties of powder constitute its chief recommendation. Kopp of Berlin has set himself to investigate the composition and action of those principally made use of (Dermatal. Wochenschr., Hamburg, April 20th, 1912). The bases of the powders may be vegetable or mineral, or both. The first are either starches, as those of wheat, rice, potato or arrowroot, or almond or beanflour or powdered iris root. Wheat starch swells at first when moistened with water or rubbed up with animal fats, then finally breaks up into granules; rice starch in similar circumstances swells much less, and potato starch hardly at all. Arrowroot absorbs more water and oil than those previously mentioned, beanmeal still more water but little oil, while powdered iris root scarcely changes. The mineral substances are more numerous. Oxide of zinc shows round grains under the microscope. These are insoluble in water though soluble in dilute acids and apt to form clumps. Armenian bole produces a tough doughy mass with water. Talc has a crystalline appearance, while magnesium carbonate is in rounded grains; both are insoluble in water. Borax and precipitated carbonate of lime are crystalline. Terra-Silicea dioxide of silicum occurs in long pointed needles. Examination and cultivations of the contents of numerous powder boxes and of the dust from the puffs or brushes were made. Many micro-organisms were discovered, but most of these were of non-pathogenic nature. In one case, however, Unna's micrococci, in another streptococci, and in a third tubercle bacilli were isolated. The conclusions reached were: Vegetable powders injure the epidermis and skin mechanically through the swelling of the powder granules in the substance of the skin, in the skin fat and skin moisture. Thus when they enter a skinpore they tend to widen it, and when frequently applied produce ugly gaping apertures. The least harmful is irisbot powder, since it alters so little. All tend to decompose, specially arrowroot and almond and beanflour. Mineral powders do not swell, or decompose, but from their angular structure they are apt in some instances to slightly abrade the surface. Oxide of zinc, Venetian talc, and precipitated carbonate of magnesia are least hurtful—mechanically or chemically. Infection of various skin disorders is a possible consequence of systematic use of powders. Instead of puffs or brushes, pledgets of cotton wool ought alone to be made use of and subsequently destroyed. Still better is it to have the powder blown on to the face by means of a compressible India rubber ball. Daily massage of the skin, and after drying, the application of a good cold cream, diminish the evils of regular powdering.—Edinburgh Medical Journal.

Adhesion of the Sigmoid.

Dr. H. A. Royster, of Raleigh, N. C., at the recent meeting of the Southern Surgical and Gynecological Association, said that sigmoid adhesion was associated with definite symptoms which he believed could be relieved by simple means. Three years ago he directed attention to sigmoid adhesion as a cause of pain in many cases of meningitis which were attributed to the ovary and other organs. Further experience and observation had convinced him not only of the importance of this adhesion, but of its more widespread interest, so that the whole question had assumed a broader aspect and was coming into consideration in every case of abdominal diagnosis that we had pre-

sented to us. Women commonly complained of left-sided pain, but it was not always properly interpreted. The ovary was too often blamed as the chief offender when, as a matter of fact, there was very little pain associated with ovarian disease. Most often the tube was the source of the pain and tubal trouble usually preceded any ovarian involvement. In a number of instances neither the tube nor ovary was found involved, yet the woman had pain. The particular thing which was characteristic of sigmoid adhesion, as observed clinically was, first, pain during defecation, and not afterward. In addition to this, some of the patients described a stoppage at certain points. Constipation was the rule, but in a few cases the condition was associated with mucous diarrhea or a mucous discharge from the bowel. Usually the pain was low down in the left iliac region, but it might be higher up, near the spleen or midway. Most of it was below the anterior spine of the ilium. A typical example of sigmoid adhesion was that of a married woman who had given birth to two or three children. She complained of incessant pain in the left quadrant of the abdomen, and was sent in as having probably a case of tubal disease. Her greatest suffering was on going to stool. She was obstinately constipated. Pelvic examination was negative. Her abdomen was opened and a classic sigmoid adhesion revealed. This was dealt with the abdomen closed. She had been free from pain now for more than two years.

"It is during the spring months more particularly that the physician is called upon to treat patients, who though not ill enough to be in bed, are not at all well. Their appetite is capricious, they sleep indifferently, or even if they sleep soundly they are not refreshed, and in the morning they are almost as fatigued and ill at ease as was the case on retiring. Upon awakening there is frequently an aching sensation in the loins, sometimes in the lower limbs, which may partially wear off as the day progresses, but there is at all times a vague, undefined, uneasy painful feeling.

The symptoms are very much like those experienced in malaria but the causes are entirely different and a different treatment is necessary.

This condition arises from the fact that in the spring the eliminative functions do not present their usual activity owing to the torpor and locked-up secretions which have existed during the winter months, when the skin neglects its duties and the kidneys are overworked.

If the condition remains neglected the probable result will be sooner or later a pronounced attack of rheumatism or grippe in one or another of its forms. All that is needed to induce such an attack is a sudden change in the weather or the exposure on the part of the patient to cold or wet or to a combination of both. This is due to a latent diathesis to which every adult is liable.

The necessity of a powerful eliminative in every prescription for rheumatism and grippe is self-evident. While antipyretics and antiperiodics may slightly stimulate the excretions and relieve congestion, thereby controlling certain features of the disease, a complete cure cannot be expected until the poisons are thoroughly eliminated from the system and the diseased organs enabled to resume normal functions.

In the treatment of all rheumatic, neuralgic and grippy conditions, Tongaline, by promoting the absorptive powers of the various glands which have been clogged, and by its stimulating action upon the liver, the bowels, the kidneys and the skin, will relieve the pain, allay the fever, eliminate the poisons, stimulate recuperation and prevent sequelae."

Post-Grippal Treatment.

In nervous exhaustion resulting from la grippe nothing equals Cord. Ext. Ol. Morrhuæ Comp. (Hagee) in tablespoonful doses before meals for adults.

Recovery of strength rapidly ensues, and relapses, so common in this disease, are prevented.

Biliary Deficiency.

"Defective elimination of bile, either from obstruction or physiological causes, is often attended by a costive habit and a production of intestinal gases, probably due to absence of the cholates, Nature's physiological cholagogue."—G. E. Dickinson, M.D., Medical Record.

Chologestin (or Tablogestin) efficiently supplies the needed hepatic stimulation, encourages the secretion of a normally active biliary fluid, checks putrefactive decomposition, assists in the emulsification of fats and, by promoting both bile and bowel drainage, acts as a physiologic laxative when constipation is due to hepatic inactivity and biliary deficiency. Samples, formula and literature from F. H. Strong Company, 58 Warren Street, New York City.

The following invitation has been received with request to publish:

You are cordially invited to attend a complimentary dinner to be tendered to Dr. William J. Robinson in recognition of his public activity as writer and lecturer and

in celebration of the tenth anniversary of the foundation of The Critic and Guide on Friday evening, March seventh, Nineteen Hundred and Thirteen, at seven o'clock at the Hotel St. Denis, Broadway and Eleventh Street, New York City.

Dr. A. Jacobi,
Dr. Willy Meyer,
Hon. George McAneny,
Dr. James P. Warbasse,
Mr. J. G. Phelps Stokes,
Mr. A. Bancroft Firmin,
Dr. A. L. Goldwater,
R. S. V. P. Committee.

Dr. A. Jacobi will act as Toastmaster.

Human and Bovine Bacilli in Bone Tuberculosis in Children.

J. Fraser states that the all important point revealed by his investigation is the fact that a large proportion of bone and joint tuberculosis occurring in children in Edinburgh owes irs origin to infection by the bovine bacillus. The bovine bacillus is introduced into the system practically by one route only, that of ingestion, and the medium with which it is ingested is cow's milk. In those cases in which the human bacillus was present, a considerable proportion showed a definite history of pulmonary tuberculosis affecting a co resident, and every fact went to prove that the infection had been a direct one from patient to child. A complete distinction can be drawn between human and bovine bacilli, and the distinction is best secured by subjecting the organism to a series of tests as detailed by the author. The subject is one which ought to be investigated in a series of different localities. It is possible that the locus may be a factor in the explanation of the difference between the above results and those of other observers.—Journal of Experimental Medicine.

Plato on Contract and Dispensary Practice.

Jollye notes that even in ancient days there were two classes of practitioners who were supposed to treat their patients differently according to whether they were club or private patients, and these two classes of medical men were consequently held in very different esteem by the public. Plato in one of his dialogues refers to the two sorts of doctors as follows: "The slave doctors run about and cure the slaves or wait for them in the dispensaries; practitioners of this sort never talk to their patients individually or let them talk about their own individual complaints The slave doctor prescribes what mere experience suggests, as if he had exact knowledge, and when he has given his orders like a tyrant, he makes off with equal assurance to some other servant who is ill, and so he relieves the master of the house of the care of his invalid slaves. But the other doctor, who is a freeman, attends and practices upon freemen;he carries his inquiries far back, and goes into the nature of the disorder; he enters into discourse with the patient and with his friends, thus at the same time getting information from the sick man and also instructing him as far as he is able, and he will not prescribe for him until he has first convinced him; at last, whed he has more and more brought the patient under his persuasive influenee, and set him on the road to health, he attempts to effect a cure. Now which is the better way of proceeding in a physician and a trainer? Is he better who accomplishes his end in a double way, or he who works in one way, and that the rude and inferior?"—The London Lancet.

Thyroid Treatment of Epilepsy.

Gelma records the happy results following the use of thyroid extract in cases of epilepsy associated with goiter, myxedema, or some other perversion of the activity of the thyroid gland. The following are enumerated as signs of slight degrees of hypothyroidism: Permanent or transitory edema, nasal obstruction, frequent muffling of the voice, falling out of the hair of the eyebrows, canities, alopecia, anomalies of heat regulation, headaches, somnolence. precocious senility, and various nervous disorders. The author has obtained the best results in the treatment of these conditions with the dry extract of the thyroid gland, administered in doses of 50 centigrams. This drug is particularly of value in the treatment of infantile convulsions.—Revue de Medecine.

Lumbar Puncture in the Treatment of Headaches.

Roger and Baumel allude to the value of lumbar puncture in the relief of the intense headaches associated with the various infectious diseases In these cases, whether the condition be called one of meningism or of meningeal reaction, or of serous meningitis, or of chemical meningitis, there is distinct evidence of a mild degree of inflammation of the meninges. This evidence consists in the increase in the content of albumin in the cerebrospinal fluid. A later stage of the inflammatory process is accompanied by the exudation of leucocytes, and finally by the actual passage of bacteria into the cerebrospinal fluid. At the same time there is an increased tension in the cerebrospinal fluid. If this is marked one

may safely remove by lumbar puncture as much as 20 to 30 c.c. of the fluid. In the ordinary run of cases the removal of 10 c c. of fluid is sufficient. Relief follows a few minutes after the operation and in some cases the headache disappears entirely. In certain instances, as in some cases of typhoid fever, several punctures may be necessary. Syphilitic headaches, particularly those belonging to the secondary period of this disease, are markedly relieved by this procedure.—Revue de Medicine.

Studies in Animal Tumors.

Lewin sums up a long article by stating that the chemotherapeutic method of Wassermann. Neuberg and Caspari may indeed fail in individual cases but is plainly seen exert a uniform specific activity. The cell poisons which are employed we know to be iumoraffin, but we do not know in just what manner. they influence the cells to their disadvantage. The necrotic change may be due to direct action on the cells or may be effected through the blood vessels. The subject cannot of course be verified upon human tissues. Hence the author prefers to work along strictly biological lines, such as are being tested extensively in other diseases Tumor substance, tumor autolysates and similiar products can be made to antagonize the growth of tumor cells. These substances circulate in the blood and there is no reason for a belief that they can poison the cancer cells in any but the most direct fashion. Unlike some of the metals and other extraneous bodies used they behave inertly to the organism at large. Clinical results have long ago been claimed for serotherapy in malignant diseases—by Coley's fluid, antimeristem, Doyen's serum, etc.—just as they have for chemotherapy(arsenic, silica, etc.) Of the two precedures biological therapy and chemotherapy, the author believes the former to be far better grounded in reason, and that work along this line will be much more profitable than chemotherapy in the long run.—Berliner Klinioche Wochenschrift.

The Trustees of National University of Arts and Sciences of St. Louis announce that a contract was signed on Feb. 21, 1913, for the building of $5,000 worth of apparatus for use in the physiologis laboratory of the medical department (American Medical College) of the University. Dr. Bernard Blass, formerly of New York City, has been elected Professor and Head of the Department of Physiology, and will assume this position with the opening of the session of 1913-1914.

Iodine in Syphilis.

While the extraordinary worth of iodine in late syphilis easily places it among the indispensable therapeutic agents made use of by modern medicine, yet it is due to the skill of the pharmaceutical chemist that iodine has been enabled to hold its high rank as a drug agent. Iodine as such, of course, is out of the question, and even the popular iodide of potash oftentimes occasions such distress as to neutralize its potential value. But, in IODIA (Battle) the physician has an iodine product of distinct usefulness and particularly in the later manfestations of syphilis, for not only does it provide a means of introducing iodine into the system but furthermore it is free from the irritating qualities of the plain iodine. Its therapeutic effects are further enhanced by the addition of certain of the vegetable alteratives which have been clinically shown to exert an influence on the syphilis processes. Whenever iodine is indicated, IODIA (Battle) may be exhibited with decided benefit.

Purulent Pericarditis.

Parkinson and Drew report the case of a boy, aged 4½ years, who had an attack of pneumonia involving the bases of both lungs. The urine contained blood, pus, albumin and epithelial and blood casts with many pneumococci. The pneumonia ran an ordinary course, the temperature. becoming normal at the end of ten days, and the signs in the right lung cleared up. The pulse rate, however, remained the same and the heart sounds become muffled, but there was no friction sound or increase of the cardiac dullness. After a few days this latter sign appeared. and finally there was dullness up to the first rib and increase of dullness to the right. At the end of a week there was swelling of the face and some edema over the precordium. Two inches of the fifth costal cartilage were excised and there were evacuated 10 ounces of pus which contained pneumococci in pure culture. The recovery was unventiful; the signs of consolidation at the left base disappeared, and the urine became normal. There were now no signs of enlargement of the heart either clinically or by the X-rays. This case is interesting on account of the exceptionally good result of treatment. The boy now shows no sign of cardiac embarrasement, and the heart moves to and fro when the patient is put on one or the other side. Exploration of the pericardium ought not to be done with the needle, owing to the difficulty of diagnosis of fluid by physical signs. It seems better to open it deliberately. and in that way evacuate its

contents, rather than to run the risk of puncturing the heart. In this case the diagnosis was fairly clear before operation, but that is frequently not the case.—Proceedings of the Royal Society of Medicine.

Endogenous Infection in Obstetrics.—Pankow (Ztschr. f. Geburtsch. and Gynak) contributes an extended paper on this subject based on bacteriological studies of cases in Kronig's clinic at Freiburg, as the result of which he claims that the possibility of an infection with endogenous organisms, whether spontaneous or artificial, cannot be denied. In primparæ, spontaneous infection with endogenous germs must be reckoned with in about 5 percent or all cases, even where the labor is uncomplicated When a vaginal examination has been made this must be increased to 9 percent. In multiparæ with uncomplicated labors a spontaneous infection will result in about 3 percent of all the cases, which is increased to 5 percent where vaginal examinations have been employed. The increase in the number of such cases among primparæ depends on the prolongation of the labor and the greater damage to the tissues' A fatal spontaneous infection with endogenous germs cannot be excluded even in uncomplicated labors as was observed in two instances by the writer. It is impossible to state definitely what percentage of cases will be thus infected where operative delivery has been employed, but a comparison with the normal labors shows that where operative delivery has been found necessary the endogenous infection thus induced fever during the puerperium more frequently because the damage to the tissures offers a better opportunity for the invasion of these endogenous germs. In private practice the possibility for such infection is undoubtedly greater than among hospital patients, and it is no longer just, in view of recent observations, to attribute every case of puerperal fever to the person who has conducted the labor. He says that the expression "the infection always comes from without" should be interpreted to read that "danger is not to be attributed to the accoucheur but resides in the external genitals of the patient," and although the vagina is possessed of sufficient bactericidal power to destroy pathogenic organisms introduced from without, it loses this property during labor when the flow of blood and liquor amnii changes the composition of its secretions. Since the vagina and the vulva are no longer subjected to disinfection, no change for the worse in the morbidity during the puerperium has resulted.

Metabolism in Pregnancy.-- (Ztschr. f. Geburtsh u. Gynak.) presents an extended study of this subject which also included a discussion of the liver function during normal pregnancy. The Dr. says that the pregnant organism, both as a whole and in its individual parts, presents diffierent physiogical functions than in the unpregnant state. Pregnancy cannot be compared with either a physiological or pathological condition. The peculiar requirements associated with this period, call for processes which differ from those needed under normal conditions. These changes must be regarded as a functional weakness in one or more organs, but on the contrary, the author claims that they constitute an evidence that the organism is able to adjust itself to the altered circumstances. The course of pregnancy under the physiological processes of the non-pregnant organism would be an impossibility. He believes that we must look upon these changes in the pregnant organism as physiological necessities and that they must not be regarded from the pathological standpoint.

Treatment with Novoiodine Paste,

The beneficial results following the injection of chronic sinuses and fistulæ with bismuth paste, as introduced by Beck of Chicago, are now well known, and the method is widelv used. Unfortunately it is not quite free from danger, as bismuth poisoning occasionally follows its use, Lotheissen (Beitr. z, klin. Chir., Bd. lxxxi.), in order to avoid the risk of poisoning, has for some time used a paste in which novoiodine is the active ingredient. This is a powder made by mixing hexamethylentetramindiiodide with talc. The powder is non-toxic, unirritating, and mildly antiseptic, and, like bismuth, throws a good shadow in radiographs, so that when injected as a soft paste it can be used to demonstrate the track of a complicated sinus. A suitable paste is made by mixing 60 parts of novoiodine with 120 parts of melted vaseline and rubbing the powder well up with the vaseline. A slightly weaker paste may be made by adding 30 parts of liquid paraffin and 10 per cent. white wax. The results following the injection are equal to those when bismuth is used, and there is no fear of poisoning when injections are large.—Edinburgh Medical Journal.

Burns and Their Treatment.

Lieber (Beitr. z. klin. Chir.) discusses the problems associated with the treatment of burns and analyzes the results of a series of 188 cases treated during the last 10 years in Lotheissen's clinique in Vienna.

He favors the view that death after a

burn, except in cases dying in a few hours from shock, is due in the majority of cases to a toxæmia. The post-mortem appearances show changes in the kidneys, liver, and heart which are known to be produced by toxæmia in other conditions, and the view that a toxin is produced either in the skin of the burned area or in the body or blood as the result of some alteration in metabolism is the only one which satisfactorily explains the conditions found.

Of the 188 cases treated, 68 were in men, with 4 deaths, 50 in women, with 10 deaths, and 70 in children, with 21 deaths. As regards the relative number of deaths in children and adults and their relation to the extent of surface burned, Lieber calls attention to the fact that the child has, relatively to its weight, a larger skin surface than the adult, so that while a burn involving about one-third of the surface area in an adult is probably fatal, one involving about a ninth of the surface area in a child is likely to have equally serious effects. He divides the clinical course of burns into 3 periods—that of shock, that of toxæmia, and that of secondary infection. The great majority of deaths occur within the period of toxæmia, i.e., the first six days. Owing to the great variations in the severity of the cases treated in different periods, an accurate comparison of the results attained year by year is not possible, but during the last 2 years of the 10 years investigated, cases have been saved which in former years, under other plans of treatment, would probably have died, and Lieber lays stress on the fact that treatment directed against the toxaemia present is likely to be most successful. Bearing this in mind, the treatment now carried out in Lotheissen's clinique is as follows: The administration of an anaesthetic or morphia is avoided. No formal attempt is made to render the skin aseptic, this being impossible without an anaesthetic and an increase of the shock already present. Gentle swabbing with benzine is allowed, followed by the application of a dry, mildly antiseptic dressing in the form of novoiodine powder covered with sterile gauze. Where pain is great anaesthesin powder may be spread first on the surface. This dressing is repeated in two days, if necessary the old dressing being removed in a bath. Before the dressing is applied blisters are snipped at the base and charred pieces of skin are cut off. The general treatment consists in the free use of cardiac stimulants and, most important of all, the frequent administration of physiological salt solution subcutaneously, as much as 7 pints being given to an adult in 24 hours. The saline is said to counteract shock and to promote the elimination of toxic material by the kidneys. Moist dressings, greasy dressings, and sedatives are carefully avoided as tending to aggravate local infection and depress the patient's resistance. Since the line of treatment indicated has been followed, the general results are said to have been much improved.—Edinburgh Medical Journal.

The Successful Treatment of Angiosclerotic Disturbances of Nutrition by Arteriovenous Anastomoses.

Wieting (Deut. Zeitschr. f. Chir.) who introduced the operation of arterio-venous anastomoses for angiosclerotic gangrene or impending gangrene, discusses the successful results and failures which have followed his operation, and summarizes the present position of the question as follows:

(1) Arterio-venous anastomosis is at present the only means we can employ in the conservative treatment of angiosclerotic gangrene and allied conditions. (2) Arterio-venous anastomosis may be used to avoid a threatened gangrene or, in case where gangrene has already occurred, to allow amputation to be performed nearer the gangrenous part than would otherwise be possible. (3) The method is only likely to succeed when certain definite indications are present, and these are, shortly: too much time must not be spent in trying any other conservative measures; the patient must be in moderately good condition, not too old, and must not be suffering from a severe general infection; that is to say, his vascular system must still be capable of a certain amount of accommodation to altered conditions; the local circulatory disturbance must be such that a free venous circulation can be reckoned on; the gangrene must not be very extensive nor spreading very rapidly, and, above all, must not be markedly infected, with the accompanying risk of an ascending thromophlebitis or severe suppuration in the stump; extensive and progressive angiospastic symptoms modify the prognosis unfavorably, but are not a definite contra-indication; the femoral artery must pulsate well if the popliteal is occluded, and the femoral vein must of course be free; each case must be decided on its merits. (4) The method of choice is a lateral anastomosis between the vessels after cutting out an oval piece from the wall of each, a central ligature of the vein being carried out at the same time. (5) When gangrene is already present the gangrenous portion should be removed at the same sitting without the employment of any complicated flap or plastic method. (6) The arterio-venous anastomosis has no effect on the angiosclerotic process as such, so that recurrence

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—owing their prolongation to constitutional or systemic weakness —are usually bound to continue until the nutrition and vitality of the whole body are substantially improved. The well-known capacity of

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to spur physiologic processes, promote functional activity and restore the nutritional tone of the whole organism, readily accounts for the benefits that promptly follow its use in all affections of the respiratory tract.

¶ When local remedies fail, or at best give but temporary relief, "Gray's" can be relied upon to so reinforce the natural protective and restorative forces of the body that even the most persistent catarrhal diseases are quickly controlled and overcome.

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Listerine is particularly useful in the treatment of abnormal conditions of the mucosa, and admirably suited for a wash, gargle or douche in catarrhal conditions of the nose and throat.

In proper dilution, Listerine may be freely and continuously used without prejudicial effect, either by injection or spray, in all the natural cavities of the body.

Administered internally, Listerine is promptly effective in arresting the excessive fermentation of the contents of the stomach.

In the treatment of summer complaints of infants and children, Listerine is extensively prescribed in doses of 10 drops to a teaspoonful.

In febrile conditions, nothing is comparable to Listerine as a mouth wash; two or three drachms to four ounces of water.

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of gangrene as the process advances is a possibility to be reckoned with. (7) The operation, when carried out under the indications given above, has not a high mortality; in fact if the cases are properly chosen it is almost nil. (8) The questions as to the feasibility of the operation can never be settled by experiments on animals; at the most these can only be used to explain the beneficial results. The decision as to the indications for its performance can only be made from clinical observations. Seeing that a number of undoubted successes have been obtained, it must be admitted that the performance of the operatiod is amply justified.—Edinburgh Medical Journal.

Modified Cow's Milk as a Substitute Food in Infant Feeding.—Dr. W. E. Fitch, in Pediatrics, emphasizes the necessity of using pure cow's milk, not milk that has been pasteurized or sterilized, but fresh, wholesome milk from a healthy herd. It is a recognized fact that the milk offered for sale in the large cities is not as pure as it should be, but under the active work of the Boards of Health and the medical profession, it is rapidly improving in quality. When procurable, certified milk should always be used.

The writer points out the fact that the modification of cow's milk with a cereal is a mechanical one due to the gelatinized starch, which changes the hard curdling cow's milk into a soft curdling milk like human milk. The casein of cow's milk clots in hard lumpy masses in the infant stomach, the digestive enzymes cannot get at it, and any means whereby we can break up the clot and make it more flocculent, will increase the digestibility of the milk; and this can be done by the use of a properly prepared cereal decoction.

Not only do cereals modify the casein of cow's milk but they, also, through their gelatinized starch, facilitate the digestion of fats, by emulsifying the fats after proteid digestion in the stomach. This is important because as Holt shows, the tendency today is to give a large percentage of fat, and the fats of cow's milk are more difficult to digest than the fats of human milk. With many infants it is often necessary to begin with an amount lees than two per cent. of fat, and rarely is it necessary to exceed four per cent. There are numerous healthy infants who cannot even digest four per cent. of fat at any time, and many during the hot weather do better on a reduction to 3 or 3.5 per cent.

Theoretically, the child under six months, because of the deficiency of salivary and yancreatic secretions is said to be incapable of digesting starches. Practically this is not true. Nearly every fluid in the human economy has a diastatic ferment and as a matter of fact the very young infant does digest starch. We have seen too many babies successfully fed on arrow root to deny this fact. The author quotes Finkelstein, of Berlin, whose experience and general sound judgment are respected by the leading pediatricians of the world, who is emphatic that very young children are capable of digesting starches, and quotes favorable published opinion by Jacobi, Epstein, Schmid, Minard, Keller, Newman, Heubner and others, while our own Kerley has conclusively shown by his experiments at the New York Infant Asylum, that "There is no age limit for cooked starch feeding."

The addition of cereals to cow's milk is not only allowable, but is to be most warmly recommended, not only in older, but also in very young infants. The advantages of cereal modifications, in addition to the readier digestion and gain in weight, are to be found in the finer sub-division of the casein in the stomach, in the emulsification of the fat, in the disappearance of soapy and dyspeptic stools, in the proteid-sparing power afforded by the cereals, and finally, in the general increment of growth.

Alcohol in the Cerebro-Spinal Fluid of Alcoholics.—Schottmuller and Schumm (Neurolog. Centralbl.) give an account of some investigations into this question. They have previously found the toxin of tetanus in the fluid, and have made some interesting observations on the fluid contents in the case of diabetics. In diabetes they have found acetone and aceto-acetic acid. Their cases were remarkable in that some of them with strong ketonuria, and in one case at least where coma was present, no acetone or aceto-acetic acid were present. They say that it is a striking fact that few substances pass from the blood into the cerebro-spinal fluid. They say, however, that one would expect that bodies which have a definite affinity with cerebral substances should pass from the choroid plexus into the fluid. They did lumbar puncture on alcoholics as soon as they were received at the hospital. They found usually that the pressure was moderately increased, and they were able to take large quantities out, in one case up to 100 c.cs. without inconvenience to the patient. In a few cases in which the pressure was not raised, they replaced the fluid with sterile normal saline. Unfortunately they were never able to determine just how much alcohol the individuals had imbibed. Microscopically, the fluid was unchanged, and they were not able to determine any cellular increase. Some of the patients who were excited before the puncture were

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is of special advantage in children It does not lock up the secretions, and will do all that morphine can
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may be used whenever iodide of potassium is indicated, and with the assurance that none of the latter's evil effects will follow
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much quieter afterwards, and those with headaches said their condition was improved. They undertook the investigation of ten cases, using the iodoform test. The preliminary test was made on fresh spinal fluid, and the final test on the same fluid after it had been distilled. The result was that in some cases alcohol was shown to be present, but in many other cases it could not be determined whether it was not its oxodation product—the alderhyde—which produced the reaction. The test was negative in two cases, but there were no means of telling whether they had drunk alcohol shortly before the test; it was only known that they were chronic alcoholics. In eight out of the ten cases the test left no doubt that there was present in the fluid either alcohol or its alderhyde. In various cases of alcoholics, considerable amounts of iodoform were precipitated out of 20 c.cs. of the fluid, the bottom of the centrifugal tube being covered with yellowish crystals having an intense iodoform smell. A quantitative analysis was not made. In one case a puncture was again made seven days after his admission, during which time the patient had drunk no alcohol. The reaction was now negative. In another case the alcohol was still to be detected four days after admission. These observations point to the conclusion that at least five days must pass before alcohol is completely eliminated from the cerebro spiual fluid. They were desirous also of determining the question as to whether the amount of alcohol found in the cerebro-spinal fluid corresponded with the amount present in the blood of the same patieut taken at the same time. It was found that though the blood contained this iodoform-forming substance, yet it was present in far smaller quantities than in the fluid. They had no opportunity of investignting the condition of those suffering from delirium tremens. The authors intend investigating the presence of other toxins in the cerebro-spinal fluid, and they are specially desirous of determining what components of methyl alcohol are the active agents in affecting the brain in poisoning of this kind.

Diabetes Mellitus and Life Insurance Examinations,—Weber states that it is well known that not every case in which sugar is discovered in the urine should be refused for life insurance. He refers to the possibility of the temporary absence of sugar from the urine of diebetic patients, when undergoing medical treatment, becoming a source of serious error from the insurance point of view. Every one knows that in slight cases the sugar in the urine may be got rid of by suitable diet; and the use of certain drugs, such as aspirin and calcium iodide, has been said occasionall to have a similar effect. But it is not quite so generally well kuown that in grave cases of diabetes mellitus, in which sugar cannot be completely got rid of by ordinary dietetic methods, it may occasionally be temporarily banished by the employment for a day or two of (more or less disguised) starvation methods. Thus, in a young woman, aged 23 years, under the author's care in 1909 at the German Hospital of London, the sugar in the urine was reduced by careful dieting to about 70 grams for the twenty-four hours. On September 10 the diet was temporarily limited to 200 to 300 grams of olive oil in the day, with as much water as was wished for, and a codeine phosphate pill (which the patient had been taking three times a day) was continued. As a result of this disguised sarvation method sugar completely disappeared from

the urine on September 12, and on September 13 the author ordered a return to the special diet for her diabetes. On the next day the urine continued 4.5 per cent, sugar again. During the days of exclusive olive oil diet the patient did not feel hungry or as if she was being starved. Once or twice she feels little nausea, owing to the oil, but she looked well and had her usual somewhat florid complexion. She lost only about 4 pounds in body weight. She was not emaciated, and on the whole gained weight while she was in the hospital. This case was one of grave diabetes mellitus, but surely a life insurance examiner, had he examined her when the sugar disappeared, might have been deceived. The reaction for diacetic acid was indeed positive, but in the absence of sugar the examiner would hardly have tested the urine for diacetic acid. Other "hunger cures" or "starvation cures" can similarly temporarily remove the glycosuria. Thus, at the Edinburgh Medico-Chirurgical Society, December 15, 1909. F. D. Boyd brought forward a case of severe diabetes mellitus in which a single "hunger day" caused complete disappearance of glycosuria for twenty-four hours, the sugar reappearing afterwards in only small amount. G. Guelpa of Paris refers to the case of a man who was refused for life insurance on account of diabetes. The result of Guelpa's treatment by starvation and purgation was that on the evening of the second day of treatment the urine no longer reduced Fehling's solution. On the third day the man presented himself for a life insurance examination, and no obstacle to his acceptance could be found. In grave cases sugar may sometimes vanish from the urine on a trial of von Noorden's "oatmeal diet." —British Medical Journal.

Notwithstanding the large number of Hypophosphites on the market, it is quite difficult to obtain a uniform and reliable Syrup. "Robinson's" is a highly elegant preparation, and possesses an advantage over some others, in that it holds the various salts, including iron, quinine and strychnine, etc., in perfect solution, and is not liable to the formation of fungus growths. (See page xiv this issue.)

The Treatment of Simple Fractures by Massage and Movement.—Watson (Edinburgh Medical Journal) very ably advocates the early use of massage and passive motion in the treatment of simple fractures. He reports 400 cases treated by this method with great success. He believes that massage and movement should be considered as an essential part of the treatment of simple fractures. Since massage allays pain, rapidly removes effusions and improves nutrition, and since movements of the joints prevent adhesions, these procedures cannot be commenced too soon—indeed, they are of most service during the first few days following the injury Massage renders reduction and retention in good position easier. The method is exacting in time and skill, but is more comfortable to the patient, and ensures a better and quicker return of function. The method is one that can be employed by any medical practitioner.

Dr. Tom A. Williams has been elected President of the Washington Society Nervous and Mental Diseases.

Epilepsy in Infancy,

Marchand calls attention to the occurrence during infancy of convulsions without any apparent cause and without prodromi, which are not accompanied by any other morbid manifestations, and which do not seem to affect the general health. In these case which are of an epileptic nature there are probably present cortical lesions which may have begun during intrauterine life.—Gazette des Hopitaux.

Salvarsan in Locomotor Ataxy.

Ord (British Medical Journal) says that two middle aged males with typical locomotor ataxy received salvarsan treatment. In case 1 two injections of 0.3 gm. of salvarsan were given. In case 2 three injections of 0.5 gm. of neosalvarsan were administered. The results were prompt and remarkable, and both patients, who were previously incapacitated from work, have been able to resume their duties.

Treatment of Infantile Diarrhea.

In the treatment of infantile diarrhea, Ellis makes use of the following combination:

Magnesii Sulphatis	3j-ij
Mucil. Acaciæ	3ss
Salolis	grn v-x
Glycerini	3iij
Aquæ Chloroformi	ad 3iij

M. Sig.: One teaspoonful every one, two, or three hours.

The author insists that the dose be ad-

ministered day and night even in very young infants. The dose every hour is, of course, only for the very urgent cases, the frequency of administration being regulated by the character of the stools. Failure of the blood to diminish is an indication for the increase in frequency of the dose. This should be kept up until the slimy nature of the stool also disappears.—Australian Med. Gazette.

Treatment of Diabetic Carbuncle.

A typical diabetic carbuncle, treated by Heddaeus, rapidly increased in size after excision of the central core and radial incisions so that the patient seemed threatened with pyemia. The process was finally checked by incising completely around the carbuncle down to the muscle at a distance of one cm. from the edge of the focus. In order to destroy the germs in the newly opened lymph spaces, tincture of iodine was applied freely and the wound was then treated with gauze saturated with 2% solution of collargol. At the same time, the patient received several intravenous injections of 5 Cc. 2 per cent. collargol solution. The process did not spread any further and the entire necrotic mass soon separated. The process was considerably hastened by the injection of a 4 per cent. solution into the tissues.—Muench. med. Woch.

Arsenic, Cinnabar and Silicates in Cancer.

A paste containing as chief ingredients arsenic and cinnabar was used locally for the treatment of cancer many years ago and has almost been forgotten. To A. Zeller belongs the credit of having again directed the attention of the medical profession to the remarkable effect of this paste in inoperable tumors or tumors of the external parts of the body where the consent to operation cannot be obtained. This treatment is materially assisted by the use of the silicates internally. There cannot be any doubt that the salts of silicon have a restraining influence upon the further proliferation of the cancer cell though it will only rarely be possible to cure a tumor by the use of these salts alone. The author has treated 57 cases by the combined method; of these, 44 were absolutely cured, 3 died and 10 are still under treatment. The clinical diagnosis was assured in all these cases and in a number microscopic sections were also made. The technique is briefly as follows: The neighborhood of the tumor is cleansed with benzine, then the paste is applied thickly. When dry, collodium is applied in case of small tumors and an aseptic dressing in larger ones. The process is repeated every 8 to 14 days. With larger ulcerations, the patients often complain of severe pains for a number of days. The silicon is given in the form of potassium and sodium silicate, of each, one-half gram three times a day. The powder should be taken at least a year after the patient is cured.—Muench. med. Woch.

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Luminal in Epilepsy.

Hauptmann has made the important discovery that the new hypnotic luminal is an excellent drug to use in place of the bromides in severe cases of epilepsy. As a rule, 0.1 Gm. was given in the morning and 0.2 Gm. in the evening before retiring. Not one of the numerous patients treated complained of the taste of the drug or of gastric disturbances, and after-effects, such as eruptious or cardiac or respiratory disturbances were never seen. A cumulative effect does not seem to occur with these doses. The effect was two-fold: the attacks were diminished considerably in frequency and they were no longer so intense. Instead of tonic and clonic convulsions with biting of the tongue there were only slight disturbances of consciousness from which the patients rapidly recovered. In most cases, the psychic condition and the general health were considerably improved. The drug can be safely employed for months and is especially indicated in the severest cases, where the bromides have no effect or where the bromides

can no longer be administered. The report of Dr. Kino is no less favorable and it seems that this new drug is destined to play a very important role in the treatment of epilepsy. The patients had suffered from the disease since infancy and the bromides were either no longer effectual or caused so disagreeable after-effects that they could no longer be given. Small doses of luminal promptly prevented the appearance of the attacks. No cumulative effects or other untoward symptoms were seen even after a long time. —Therap. d. Gegenwart.

Program Seventh District Clinical Conference

Charlotte, N. C., March 10 and 11, 1913.

Monday Evening, March 10

AMPHITHEATER NORTH CAROLINA MEDICAL COLLEGE

8:00 to 9:00 p. m.—Dr. J. P. Munroe
1st—Peripheral Neuritis
2d—Paresis
3d—Stab Wound of Spinal Cord
4th—Lateral Sclerosis
5th—Brain Tumor

9:00 to 9:30 p. m.—Dr. H. P. Barrett
Report of Kidney Cases, with Presentation of Pathological Specimens

9:30 to 10:00 p. m.—Drs. A. J. Crowell and J. W. Squires
1st—Case of Syphilis, with Demonstration of Spirochaetes and Wassermann Reaction
2d—Cystoscopic Examinations

10:00 to 11:30 p. m.—Smoker, at North Carolina Medical College

Tuesday, March 11

CHARLOTTE SANATORIUM

Operating Room No. A

9:00 to 10:30 a. m.—Dr. R. L. Gibbon—Herniotomy
11:00 to 12:30 a. m.—Dr. G. W. Pressly—Herniotomy
12:30 to 2:00 p. m.—Dr. C. M. Strong—Retroversion and Trachelorrhaphy

Operating Room No. B.

9:00 to 10:30 a. m.—Dr. A. J. Crowell
1—Prostatectomy
2—Hemorrhoids
3—Administration of Salvarsan

11:00 to 12:30 p. m.—Dr. A. M. Whisnant
1—Frontal and Maxillary Sinuses
2—Tonsillectomy

12:30 to 2:00 p. m.—Dr J. P. Matheson
1—Two Submucus Resections
2—Two Tonsillectomies
3—Operation for Squint
4—Mastoid

PRESBYTERIAN HOSPITAL

Operating Room No. 1.

9:00 to 10:00 a. m.—Dr. A. G. Brenizer—Herniotomy

10:00 to 11:00 a. m.—Dr. J. R. Irwin—Two Appendectomies

11:00 to 12:00 a. m.—Dr. C. A. Misenheimer—Application of Plaster of Paris Cast for Tuberculosis of Hip Joint

12:30 to 2:00 p. m.—Dr. R. L. Gibbon—Appendectomy

Operating Room No. 2.

9:00 to 10:30 a. m.—Dr. J. P. Matheson
1—Three Tonsillectomies
2—Congenital Cataract

10:30 to 11:30 a. m.—Dr. Jas. R. Alexander —Two Circumcisions

12:30 to 2:00 p. m.—Dr. Harry Wakefield —Operation Unannounced

ST. PETER'S HOSPITAL

Operating Room No. 1.

9:00 to 10:30 a. m.—Dr. B. C. Nalle
1—Herniotomy
2—Appendectomy

11:00 to 12:30 p. m.—Drs. C. M. Strong and Oren Moore

12:30 to 2:00 p. m.—Dr. A. G. Brenizer—Bone Resection

Operating Room No. 2.

11:00 to 2:00 p. m.—Dr. J. H. Tucker
1—Tenotomy and Resection for Internal Squint
2—Double Pterygium
3—Secondary Cataract

GOOD SAMARITAN HOSPITAL

9:00 to 10:30 a. m.—Dr. C. M. Strong
1—Ligation Uterine Arteries for Inoperable Carcinoma of the Uterus
2—Trachelorrhaphy

10:30 to 12:00 a. m.—Dr. A. G. Brenizer
1—Gastro-enterostomy
2—Double Inguinal Hernia

12:30 to 2:00 p. m.—Drs. A. J. Crowell and J. W. Squires
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Operations Unannounced

AMPHITHEATER NORTH CAROLINA MEDICAL COLLEGE

1:00 to 2:00 p. m.—Dr. Henry Norris, Rutherfordton, N. C.
Craniotomy on Cadaver

AMPHITHEATER NORTH CAROLINA MEDICAL COLLEGE

3;00 to 3:30 p. m.—Dr. I. W. Faison—Children's Clinic

3:30 to 4:00 p. m.—Dr. J. P Munroe
1—Aneurism Thoracic Aorta
2—Tumor over Carotid, Resembling Aneurism

4:00 to 4:30 p. m.—Dr. W. C. Nisbet—Clinic on Diseases of Stomach

4.30 to 5:00 p. m.—Dr. A. G. Brenizer—Disertation on Lane's Kink, Jackson's Membrane, and Caecum Mobile

5:00 to 6;00 p. m.—Drs. W. D. Witherbee and Jno. Donnelly
Tubercular and Skiagraph Clinic, Presenting Ten Cases of Pulmonary Tuberculosis, Illustrating Different Stages, with Exhibition of Cases and X Ray Plates.

Adenopathy in Children.—Ssokolow (Archiv. fur Kinderhk.) deals with the anatomy, physiology, bacteriology, pathology and clinical aspects of the diseases of the glandular system. Three instructive cases of infection with streptococcus, influenza bacillus and bacillus coli are cited. Persistent irregular temperature was present in all. Adenopathy is one of the most common diseases of childhood. The peripheral nodes are most vulnerable, especially the submaxillary and cervical nodes. The mediastinal and trachobronchial nodes come next in frequency, while the mesenteric nodes suffer less often. The affection may run an acute, subacute, or chronic course, and is due to the presence of various bacterial and non-bacterial irritants. The tubercle bacillus is most often present, but the streptococcus, staphylococcus, pneumococcus, influenza bacillus, bacillus of pertussis, bacterium coli and typhoid bacillus have also been demonstrated. These may be present in a latent state. The diagnosis of disease of the peripheral nodes is not especially difficult. That of the nodes in the body cavities is more difficult, as at times only the presence of fever reveals its existence. The disease may run an acute course with considerable temperature, or a milder, but much more prolonged, course. The treatment must be conservative. Inunctions, massage and other procedures intended to hasten absorption should be avoided. Extirpation is not recommended. Incision is advised only after suppuration is well established. Hot compresses, cataplasms and light therapy are useful in the treatment of the accessible nodes. In affections of the tracheal nodes an absolutely pure dust-free cold climate is necessary. In diseases of the mesenteric nodes a non-irritant, non-fermentable, and sterile diet is advised.

Mucous Gastritis in Infancy.—Cautley (British Journal of Children's Diseases) says that this is more common in infants before the fourth month The prognosis is good with careful treatment, but guarded in marasmic or premature children. Pathologically speaking, it is a catarrh of the gastric mucosa. Its causes are high fat feeding, preservatives in milk and infective agencies, with malnutrition and prematurity as predisposing factors. While it occurs in older children, its frequency and ill-effects are not so pronounced.

Treatment.—Lavage may be of service, but is often unsatisfactory; bismuth is occasionally of assistance, alcohol being contraindicated; proper feeding is the most efficient. For cow's milk the author usually substitutes sweet whey powder, malted milk or Allenbury No. 1., after several days beginning to add small amounts of fresh cream, which is gradually increased to normal.

Inasmuch as there is often a question of diagnosis from other forms of gastric disturbance in children, the author's classification of wasting diseases of children is interesting: (1) Atrophic dyspepsia, ending in marasmus; (2) acid dyspepsia; (3) pyloric spasm; (4) mucous gastritis; (5) hypertrophy of pylorus.

Albuminuries in Relation to Life Insurance---Skirving, in a paper presented before the New South Wales branch of the British Medical Association, speaks of the attitude taken by him as Medical Referee toward applicants whose urine examinations showed albuminuria in varying degrees. Insurance societies, until recently, have looked somewhat askance on albuminurics in general, but he in his year's work has arrived at a distinction in these cases, dependable on several factors, such as age, previous condition of health, and family history.

These albuminuric cases are broadly divided into two classes—functional and organic. The factors determining functional and not organic albuminuria are as

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follows: (1) Absence of any recent cause for nephritis, such as the exanthemata, diphtheria, or a clear history of ordinary anecedent acute nephritis with its classical signs. (2) Absence of any of the ordinary stigmata of chronic renal disease, especially cardiovascular changes. (3) The fact that the proponent is under 25 and presents a healthy, wholesome appearance. (4) That the urine is of a good or even high specific gravity. (5) That the amount of albumin is very slight or moderate in amount—that it is not constant, i.e., that it is often absent at certain hours of the day, and frevuently its appearance is influenced by food or by cold. (6) That the microscopical examination of the urine reveals no important suggestive abnormality. (7) That the blood pressure is not unduly high.

The imaossibility of determining all these points in one urine examination of an albuminuric is realized, so three tests, about six hours apart, covering twelve hours, are made, and in frequent instances the urine is examined microscopically, and the blood pressure recorded.

If the above facts, taken generally, are favorable, and the applicant is under 25 years of age, he is accepted at the rate for age. If the applicant is over 25 and under 30, acceptance is advised at select rates or with moderate loading. Over 30, cases are often deferred or accepted with a heavier loading. As before mentioned, the family history, previous stato of health, and age of the applicant have a strong bearing on the ultimate outcome of these cases. Each case must be judged on its own merits. In a synopsis of 156 cases presented, showing albuminuria, a little over 2 per cent. were women; 112 ranged from 16 to 25 years; 17 at 15 years or under, and 27 over 25 years.

Skirving, for ail ordinary purposes, employs the time honored Heller's cold nitric acid contact test, and Esbach's test, always remembering the possible pr sence of nucleoalbumin or urates. From the business or actuarial viewpoint, the admission of these functional albuminurics to the benefits of life insurance is advisable, as the greater

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majority turn out well. As to the financial success gained by the present attitude of the writer's company toward these cases, only time can show; but much evidently depends on the keenness of diagnosis of the medical examiner.—Australasian Medical Gazette.

Comparison of Simultaneous Polygraph and Micrograph Tracings.

Meara, Coffen and Crehore from a study of a number of tracings conclude that the delicate mechanism of the micrograph registers the movements in the heart and blood vessels more accurately than does the polygraph. The inertia of the polygraph lever and diaphragm distorts the tracing. The difference between the results obtained with the two instruments is shown by the records made simultaneously with the micrograph and the polygraph. The micrograph is

particularly useful for recording heart sounds. While the micrograph will not supersede the polygraph or electrocardiograph, the authors feel that it has distinct possibilities as a clinical instrument.—Journal of Experimental Medicine.

Tuberculin Treatment of Surgical Tuberculosis in Children.—Forster (Beitr. zur Klin. der Tuberku.) reports the tuberculin treatment in 21 cases of tubercular bones and joints in children. Very small dosage was used, beginning with one-half, or one millionth of the milligram, as these children are particular susceptible to tuberculin. The focal reaction and the puncture-hole reaction should be mild and the general reaction very slight. The dose is not increased until the local reaction ceases after injection. If the reaction is too severe the dose is reduced one-half and is not given until all signs of reaction are gone. Increase in dosage is made very gradually, watching carefully the reaction from each dose. The best results were invariably in those cases in which the von Pirquet reaction was the sharpest. Of the 21 cases reported, 3 were not benefitted, while marked improvement was shown in all the others. The routine treatment of surgical tuberculosis—rest, fresh air and food—was used in all the cases.

Foreign Bodies in Bladder of Girl Infants.—Abels (Wiener klinische Wochenschrift, Vienna) says that foreign bodies of all kinds have been found in the bladder, but Abels reports 2 cases which are quite unique. Both were little girls, one nine years of age, the other seventeen months, and in each a piece of paper wound around with a hair was found to be the cause of the severe cystitis. Evidently the paper had been rolled and wound with a hair and introduced into the bladder as a catheter by another person. In a somewhat similar case reported by Blum, in a girl of four, threads from the child's clothing were found in the bladder, and it was learned that she had a habit of pressing her clothes against the urethra to control micturition.

Epigastric Hernia in Children.—Brandenberg (Archiv. fur Kinderhk.) says contrary to the opinion expressed in the textbooks, this is not a rare condition in childhood. The most striking symptom is pain after meals, more especially after breakfast. It is usually relieved by pressure on abdomen. The pain usually lasts only a few minutes. Palpatation shows a small tumor just beneath the skin, which disappears under pressure with a gurgling sensation. In the absence of a tumor a sharp edged square ring is felt in the linea alba. Usually it is found in the median line, above the umbilicus, occasionally to one side of the umbilicus. The exciting causes are obesity and increase in abdominal pressure during crying or severe coughing spell. Preperitoneal fat may simulate a hernia. The hernial sac contains free or adherent omentum, at times the sac is empty. Radical operation is rarely indicated. In the cases of true epigastric hernia, situated more than 1 cm. above the umbilicus, the use of a rubber pad held in place by adhesive plaster is satisfactory. Applied for a considerable time it produces complete disappearance of the subjective symptoms. In the paraumbilical hernia, in which the ring is more than ½ cm. long, this mode of treatment is rarely satisfactory, especially in children above one year of age. These cases require surgical treatment. If preperitoneal fat alone is present, its removal is all that is necessary. But if a sac is present it should be opened, and if the omentum is adherent it should be resected. The sac should be sutured with very fine needle and silk. While paraffin injection usually relieves the symptoms promptly, the end resules are not satisfactory. Recurrences with this mode of treatment have been seen frequently. The results of the radical operation are more satisfactory in children than in adults.

Antiscarlatinal Serum.

Reiss and Jungmann (Deutsch. Arch. f. Klin. Med.) reports the employment of serotherapy in scarlet fever in 12 cases, and call attention to the remarkable turns for the better in 10 of these patients after an intravenous injection of from 40 to 100 Cc. of serum drawn from several scarlet fever convalescents and mixed.

The temperature and pulse dropped by nearly 3° C. in from nine to fourteen hours the drop beginning after two to four hours. The serotherapy did not seem to have the sligtest action on any secondary phenomena the lesions in the tonsils, lymph nodes and joints continuing or developing unmodified by the serotherapy. This fact is regarded as proof of the efficiency of the serum, as the fever dropped and the general condition materially improved notwithstanding the presence or progressive course of a destructive angina, for example. They now make it a rule to apply the serotherapy only in those cases in which recent scarlatinal infection is responsible for serious symptoms. The patients all began to convalesce the fourth day or fifth at latest, while in 200 other cases the fever lasted from four to fifteen days, with an average

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of six days. The fever terminated dy crises in only 2 of these 200. while this occurred in all the 10 serum-treated cases. They prefer to centrifugate the serum from at least three convalescents and distribute it in fused ampullas containing each 50Cc. to which 5 drops of a 5 per cent phenol aolution has been added. Each separate serem is tested beforehand by inoculation and for the Wassermann reaction.

Post-Grippal Treatment.

In nervous exhaustion resulting from la grippe nothing equals Cord. Ext. Ol. Morrhuæ Comp. (Hagee) in tablespoonful doses before meals for adults.

Recovery of strength rapidly ensues, and relapses, so common in this disease, are prevented.

Diffuse Gonococcal Peritonitis;

The important part played by the gonococcus in the etiology of lacalized pelvic peritonitis in the female is generally conceded; not so, however, the fact that a diffuse purulent peritonitis may result from a pure gonococcal infection.

Albrecht (Munch. med. Woch., 15th October 1912) records four cases of the latter condition, the gonococcus being recovered in pure culture from the exudate in each case. The clinical picture in each was the same, viz., sudden, very acute, onset, the development within a very short tims of the signs of a severe diffuse peritonitis, and the rapid subsidence of all symptoms after operation, fully bearing out the dictum of Doderlein that "gonococcal peritonitis, in spite of its acute character, is distinguished by its rapid course and favorable termination."

The casee comprised three females and one male, and in all, the diagnosis before operation was "acute appendicitis." At the time of onset of their abdominal symptoms three of the putients were suffering from acute gonorrhoea. In each case on opening the abdomen a quantity of seropurulent fluid escaped, and the infection was seen to be diffuse, if not generalized. An immediate microscopic examination of the benign nature of the iufection the abdomen was closed without drainage in three of the four cases. The recovery in all was rapid and unventful.

In one case repeated differential blood counts were made to determine if there were present the eosinophilia on which several writers have laid stress as a sign of an ascending gonorrhoeal infection; on no occasion, however, was the slightest degree of eosinophilia found.

Albrecht claims that these are the first undoubteb cases of diffuse gonococcal peritonitis which have been recorded. He believes that in them the rapid spread and diffuse character of the peritonitis was due to a specially virulent strain of gonococcus, which by its rapid spread allowed the peritoneum no time to form the plastic fibrinous adhesions which characterise the usual pelvic type of gonococcal peritonitis.—Edinburgh Medtcal Journal.

Lord Rosebery, at the distribution of prizes at London Hospital Medical College, said people of his generation were brought up on "Pickwick," under the impression that medical students were composed of people like Bob Sawyer and Benjamin Allen, whom he thought the vilest specimens of the human race. He certainly did not believe that they or anything like them ever existed. There was a proverb that every man by 40 was either a fool or a physician. And that at the affe of 40 every man knew what suited his constitution, and acted and dieted himself accordingly. He was certainly not a physician, and he had passed 40. The physician, like the poet, was born, and not made. In that respect he must have the instinct of his profession born with him. It was the noblest secular profession in the world. It was the forlorn hope of humanity, because it must ever in the end be conquered by the Angel of Death. He did not think that a gloomy view to take of the profession: They were engaged in the most heroic fight in the world, and they were fighting it not for their own selfish interests, but in the cause of humanity itself. Let them take the great conquerors of history—Caesar, Charle nague, Napoleon, Wellington, and the rest before whom we all bend the knee. The name of Lister outweighed them all in the universal gratitude of mankind.—Australasian Medical Gazette.

Masengill Bros. Co., Bristol, Tenn., advertise in this issue their Creo-Dermo, which is an external application for eczema and other obstinate skin diseases, and which has a large sale in the Southern States. Several of their customers have written that they have had marked results with Creo-Derma in their cases of pellagra, and this firm is anxious that others give it a trial and will mail a free sample.

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Gelatin in Hemorrhage.

If the blood of cases suffering from hemorrhage (hemophilia, anemia, hemorrhagic diathesis) be examined systematically, it will generally be found that the viscosity is materially reduced as compared with the normal. E. Cmunt has made the important observation that gelatin will considerably increase the density of the blood in these cases. The best results were always obtained when a 10 per cent. solution was injected subcutaneoosly, though a 3 per cent. solution given by mouth also had a decided effect in the majority of cases. In one case, 200 Cc. of a 3 per cent. solution were injected repeatedly into the rectum but the viscosity of the blood was not improved, showing that this form of administration is probably not effective. Scientific proof is furnished by the author that gelatin checks hemorrhage by increasing the density of the blood.—Medizinische Klinik.

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The Main Building Front View.

The following directions are suggested for the benefit of those who may forward material for examination.

All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.

Seventh Street Entrance.

The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test. — After carefully washing, prick the lobule of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and allowed to dry without being spread out on the suface of the slide. After they have dried, the

slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

Second Method.—Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count. etc., should be sent to the labaratory on glass slides. As thin a smear as possible should be made.

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Smears For The Detection of Gonococci.—One drop of purulent discharge from the urethra should be placed at one end of a clean slide and a thin smear made overthe surface of the slide.

In collecting a specimen from a female patient, care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a sterile swab or other instrument. Two smears should always be sent to the laboratory.

Clinical Laboratory, Showing Autoclave, Hood, Operating Tables, Etc.

Urine.—for bacteriological examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15-20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlic 's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological.—material from either operation or autopsy should be wrapped in gauze moistened with salt solution surrounded by oiled paper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and the material from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They should rest upon a pad of absorbent cotton, which is placed in the bottom of the jar before

the tumoris dropped in.

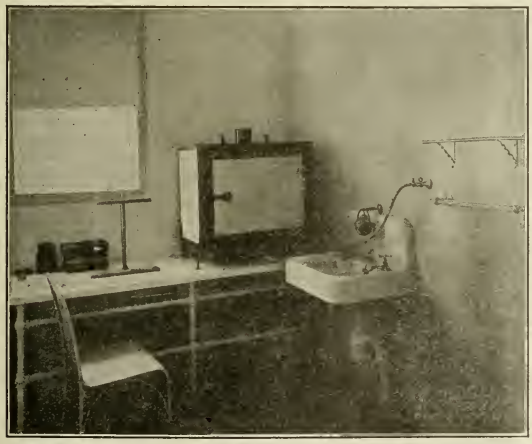
Feces.—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

Wassermann's Test.—Since the advent of the discovery of 606 for the cure of Syphilis. the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.

(Clinical Laboratory, Showing Supplies, Working Table. Etc.)

Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourinquet applied, taken the blood from the vein by means of the syringe.



Clinical Laboratory, With Hot Air Sterilizer, Scales, Lavatory, Etc.

2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourinquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohollam , or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tue, allow to coagulate, cork, pack and mail as any other fraigle package. Atleast two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk.—The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents.—should be sentin a sterilized bottle. Alarge vaseline or quinine bottle usually answers the purpose.

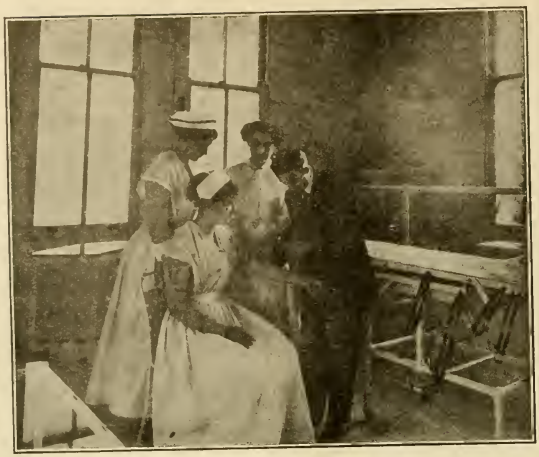


Fig 1.

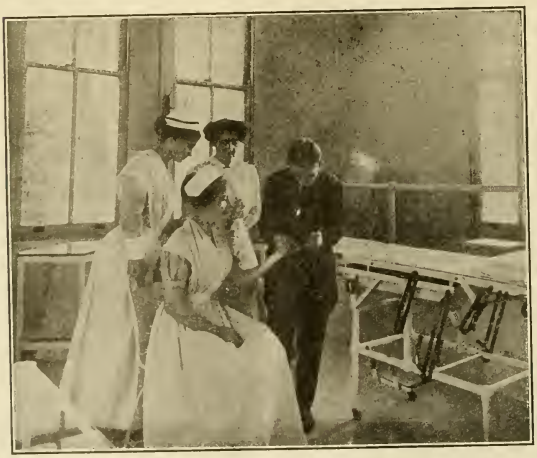


Fig 11.

The following table gives the cost of many of the examinations made in this laboratory:

Smears and Stains (tubercle bacillus,) gonococci, etc. $1.00

Blood.

Hemoglobin and Erythrocytes 1.50
Leucocytes..... 1.00
Differential..... 1.50
Malarial parasites 1.00
Complete analysis3.00

Urine.

Chemical 1.00
Microscopical .., 1.00
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Pathological Sections.....5 00

Feces Examination 2 00
Blood Culture ... 5.00
Cultures and isolation of bacteria..... 5.00
Stomach Contents2.00
Widal Test..... 2.50
Tissue Sections.. 5.00
Tuberculin Test 5.00
Wassermann's Test 10.00

Milk.

Chemical 2.50
Bacterial 5:00
Water analysis, bacterial examination.. 5.00
Chemical examination including alkalinity, chlorides, ammonia, nitrites and nitrates ...5.00
Quantitative analysis ..... $10.00 to 25.00
Culture Media (per tube) ..... .25
Sterilized tubes and pipettes ..... .15
Coagulation time 2.50
Vaccines..... 10.00
Sterilized Tubes with swab .....50 Bacterial Cultures 1.00 Sterilized solution.. 5.00 Spinal Puncture and Analysis 5.00

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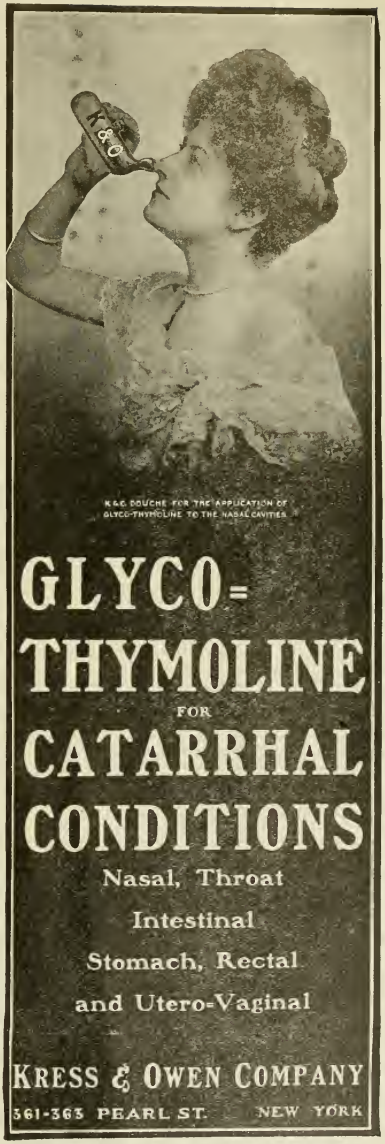

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The Madness of Kings.

The recent death of the aged Regent of Bavaria, and with it the reopening of the whole painful story of this ill-fated house, raises questions of peculiar interest in connection with the psychiatry of royal personages. It would appear at first sight that if the moral and intellectual qualities of a sovereign can add to the enrichment and glory of a nation, the contrary should also hold good. It is remarkable to note, however, how little dependent the evolution of a nation really is upon the mental or physical health of its monarch. Moreover, the history of the House of Bavaria shows that a madman clothed in purple can on occasion be an excellent head of the State. The outstanding cases of insanity in reigning monarchs are not numerous. Perpaps one of the earliest to which historical reference is made, is that of Nebuchadnezzer, King of Babylon, who suffered from lycanthropy, a form of insanity of comparative frequency in antiquity as well as in the Middle Ages. Beyond being afflicted with jealously amounting almost to monomania, there is no indication that Saul, King of Israel, was insane. More recently Peter III of Russia, grandson of two great kings—Peter I on the maternal side, and Charles XII of Sweden—was a degenerate in the full meaning of the term. Paul I of Russia, his son, was sickly, weak, and epileptic from birth. He it was who proposed that the sovereigns of Europe should settle their differences by mortal combat. Although he imperiled the country by his extravagance and eccentric habits, the pathological history of Paul is interesting in that he was the superior of his father.—British Medical Journal.

Vaginal Discharges.

In many instances vaginal discharges persist for the reason that no energetic local measures are taken to combat the causative condition. Thus, in vaginitis, of either specific or non-specific origin, if local applications in the form of tampons soaked in an antiseptic solution of positive value were employed in a systematic manner, relief would follow. In this connection the more than ordinary value of Ecthol (Battle) in vaginal discharges may be mentioned. In vaginitis, used on tampons, it exerts its germicidal influence on the causative organisms and brings about a gratifying relief from the annoying features accompanying the vaginitis. Ecthol will also be found of much value in cervical erosions.

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After long and laborious clinical study—extending, in fact, over a period of more than twenty months—Messrs. Parke, Davis & Co. announce the addition of Pneumonia Phylacogen to their list of therapeutic agents This product is designed for the treatment of pneumonia or any infection caused by the pneumococcus. Administered in the early stage of the disease it is said to cut short the pneumonic process in a manner that is truly remarkable.

Pneumonia Phylacogen has been administered to patients of all ages and of many nationalities, with highly gratifying results in a large majority of cases. "From experience gained in the study of typical cases treated under favorable circumstances," one writer remarks, "we are led to believe that almost every case of pneumonia seen within the first twenty-four hours after the initial chill will recover if proporly treated with Phylacogen." Another observer, a professor in one of the large American medical schools, pays the product a high compliment in these words: "Pneumonia Phylacogen is the only therapeutic agent in my experience that has ever shown a definite therapeutic action on the pneumonic process."

In view of the fact that pneumonia is one of the commonest and most fatal of infections (it is said upon good authority that it causes more deaths than tuberculosis, scarlet fever and smallpox combined), the new Phylacogen gives promise of a veritable therapeutic blessing.

In the early stage of phthisis Cord. Ext. Ol. Morrhuæ Comp. (Hagee) does more good than any other medicinal agent. Even when symptoms of secondary infection are prominent, such as fever, sweating, and rapid wasting, it is well borne. It is also valuable in preventing the development of tuberculosis in those who, through physique and heredity, have a marked predisposition to the disease.

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show that the pancreas might be considerably affected in scarlet fever, and now record ten cases illustrating involvement of the suprarenals and pancreas in children, aged from three to eleven years, four of whom died. The symptoms of suprarenal involvement in scarlet fever are tachycardia, arterial hypotension, asthenia, epigastric pain, gastrointestinal disturbance and melanodermia. Except in cases of suprarenal hæmorrhage no macroscopic changes as a rule are seen postmortem, but histological examination shows that these glands are profoundly affected. The lesions are chiefly confined to the cortex, and consist of degenerative and hæmorrhagic lesions with disappearance of the normal lipoids. The symptoms of scarlatinal pancreatitis are not always definite, but are sometimes manifested by acute abdominal pain, most intense in the epigastrium, and lasting on the average three to five days, by intense and rapid emaciation, and by copious ill-digested and fœtid stools. The anatomical lesions of scarlatinal pancreatitis are interstitial and degenerative. The acini are much more often and profoundly affected than the islands of Langerhans. Contrary to what is observed in the suprarenals, diapedesis is well marked. As treatment suprarenal opotherapy, either by adrenalin or suprarenal extract, is recommended.—British Journal Children's Diseases.

Typhoid Fever in Children.

Zarchi, in a brief historical resume, remarks that whereas it was formerly held that typhoid was infrequent in children, and that generally the milder forms were the commonest, the prevalent view is that it is relatively common, and not severe forms of the disease are quite frequent. A small epidemic in Freiburg in the spring of 1910 confirmed this opinion. There were thirteen cases aged 1-15 years (very evenly distributed from the first year), ten cases aged 16-30 years, and six cases over 30 years. The epidemic was traced to the milk supplied by one dealer. The mortality among the children was 10.5 per cent., among the adults 25 per cent. Five of the children had intestinal hæmorrhage. In the symptomatology Zarchi points out the frequency in children of vomiting; out of the thirteen patients three children vomited during the early days, and two throughout. All had bronchial catarrh. Rose-spots were only absent in two children (one of them was not seen till fourteen days after the illness began). In nearly all cases a maximum temperature of 40° C. was reached; the spleen was found to be enlarged by percussion in one case, and palpation in all the others. The Gruber-Widal reaction was positive in every case. Leucocytic counts in six cases were as follows: Leucopenia in one case, in two others no diminution, and in three the following variations were found: (1) 6650-26,700; (2) 6606-11,700; (3) 6180-9000. Severe nervous symptoms were present in 30 per cent. of the cases; there were five relapses and no serious complications.—British Journal of Children's Diseases.

Softening of the Brain Acknowledged as the Result of Accident.

Rauber relates the case of a man who sustained a fall of 4 meters height upon the nates, which, as a consequence, showed bruises. The victim was much frightened, and unable to recall whether he had lost consciousness at all. He lay in bed a fortnight and did not recover wholly from the effects of the injury for six months. No physician had been consulted at any time. Three years later, he was pronounced of unsoud mind (circular insanity) but this was not attributed to the accident. When the author first saw the case, the subject presented the picture of dementia paralytica. The pupils were narrow and rigid, the tongue tremulous, no knee reflexes. The first signs had been noted as an alteration of disposition about six months after the injury. His health before the latter had been excellent. The author gave his expert opinion that the shock of the injury was calculated to precipitate first a tabes dorsalis and later the cerebral softening. Such cases have been reported with this expertisation. Goldscheider, in a deposition, stated that the existence of such a sequence was well recognized. The victim upon the author's testimony was awarded his accident insurance, but the case was at once appealed. A further expert opinion held that the case was one of taboparesis. Since the syphilitic foundation of the latter was recognized, a superposed trauma must answer two requirements. 1. It must be a considerable injury, but not necessarily involve the cranium directly. The shock to the body at large and especially the psychic shock must be taken into account. 2. A certain interval, from a few months to eighteen months, must have elopsed before the symptoms appear. Had it not been for the accident, the patient would doubtless have been able to earn his living for an indefinite period.—Zeitschrift fur Versicherungsmedizin.

Doctor Johnson and the Doctors.

"Dr. Johnson," says Boswell, writing under date 1784, the year of Johnson's death, "had in general a peculiar pleasure

The Charlotte Medical Journal

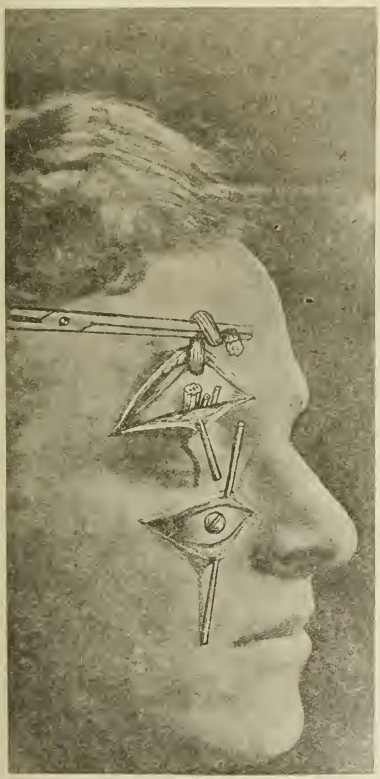
VOL. LXVII CHARLOTTE, N. C., APRIL, 1913. No. 4

Avulsion of Nerves in Facial Neuralgia with Report of Four Cases.

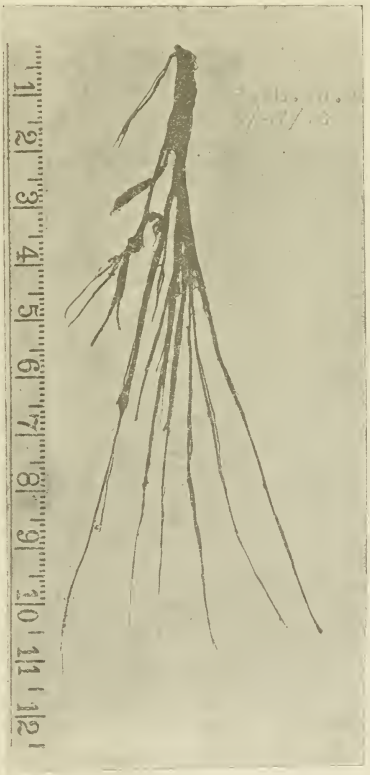
By Herbert P. Cole, M.D., Mobile, Ala.

We have been led to adapt avulsion of the nerve trunks to the treatment of trifacial neuralgia in the belief that of all of the minor surgical procedures it offers certainly a minimum of operative risk and a greater tendency for a permanent relief of the condition than has the intra-neural injection of the trunks with boiling water, air, antipirine, alcohol, osmic acid and other substances. The average period of temporary relief is certainly as long, if not longer, than that following the intra-neural injections.

Simple section of the nerve offers the least benefit of the minor operations. The high mortality rate in resection of the Gasserian ganglion always warrants our first attempting minor procedures for the relief of this condition. Many cases present grave lesions contra-indicating the radical Gasserian ganglion operation. Of the Gasserian operations apparently Murphy's extra-dural section of the ganglion with the interposition of a wax plate pressed into the foramen ovale appears to offer all the benefits of the



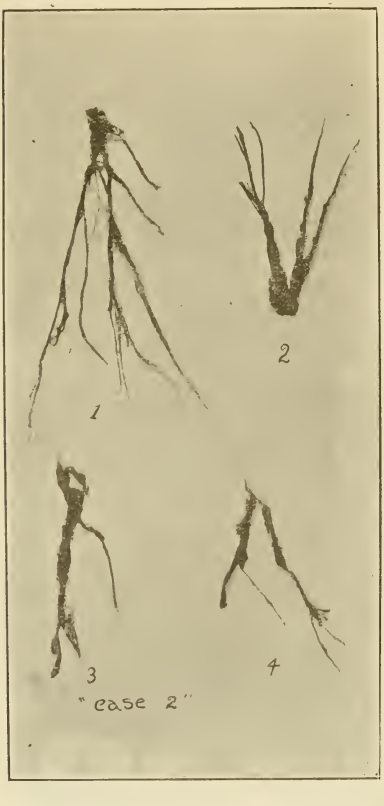
SCHEME OF OPERATION. Note that the supra-orbital branch is being slowly avulsed by twisting upon a hemostat. The proximal stump will be rolled up in a flap of frontal periosteum and tucked under the roof of the orbit. A solid silver screw permanently plugs the infra-orbital foramen from which the infra-orbital branch has been avulsed.



CASE I. Actual size of avulsed portion of infra-orbital nerve, 11 1-2 cm. (4 1-2 inch).

Gasserian resection with a greatly reduced mortality rate.

The permanency of cure from the avulsion method depends not alone upon the thoroughness of the avulsion and whether or not the ganglion itself has become involved, but also upon the thoroughness with which we block the proximal nerve root to prevent the regeneration so prone to occur in all sensory nerves. The silver screw fixed in the infra-orbital foramen offers a successful obstacle to the regeneration of the infra-orbital division. The supra-orbital stump has been successfully blocked by rolling it in a flap of frontal periosteum which may be rolled under the orbit. As yet we are unfamiliar with any method of blocking the roots of the inferior dental or lingual nerves.



CASE 2. Actual specimens—slightly reduced.
1. Right infra-orbital nerve.
2. Right supra-orbital nerve.
3. Right inferior dental nerve.
4. Right lingual nerve.

Since June 27th, 1910, we have avulsed one or more divisions in four cases of trifacial neuralgia, and as seven months have elapsed since the last case was avulsed we feel that our observations on the results in these cases may be of some value as to the efficacy of the procedure.

BRIEF RESUME OF CASE REPORTS.

Case 1.—June 27th, 1910, Mr. H.—Providence Infirmary, Mobile, Ala. Referred by Dr. F. S. Hester, Belmont, Ala.

Proximal stump of the supra-orbital rolled in frontal periostal flap and tucked under the infra orbital margin. Proximal root of infra orbital division plugged with silver screw in infra-orbital canal. Antrum of Highmore freely opened, curetted and packed through an oral incision. Old granulations found in the antrum. This patient, a white male, aged sixty-four, had suffered repeated attacks of neuralgia over the distribution of the supra- and infra-orbital nerves for three years. A marked degree of arterio-sclerosis, mitral insufficiency and chronic interstitial nephritis contra indicated a Gasserian operation.

Postoperative History.—This patient has never had an attack of neuralgia since the operation, a period now of two years and nine months.

Case 2.—Mr. J. W. H.—Southern Infirmary, April 14, 1912. Referred by Dr. Frazer.

Avulsion of supra-orbital, infra-orbital, inferior dental, and lingual nerves—right.

The proximal roots of the supra- and infra orbital nerves were blocked by the same procedures. The inferior dental was removed from behind the ramus of the jaw and the lingual division by the oral route. There was no effort to block the regeneration of the proximal division of these two nerves. This patient had suffered excruciating pain and repeated attacks of neuralgia of the inferior dental and lingual division of these nerves for six years. For two months preceeding the operation there were repeated attacks in the supra- and infra-orbital division of the nerves.

Postoperative History.—This patient has had no recurrence of neuralgia in the supra- and infra-orbital division—now a period of one year. There has been no recurrence of neuralgia in the lingual nerve for one year. There was entire relief in the inferior dental nerve for six months. In the past six months there have been slight attacks of neuralgia in the inferior dental nerve increasing in frequency and severity.

Case 3.—Mr. F. H.—Mobile Infirmary, August 10, 1912. Referred by Drs. Knighton and Hale, York, Ala.

Avulsion of the supra-orbital and infra-orbital nerves—left.

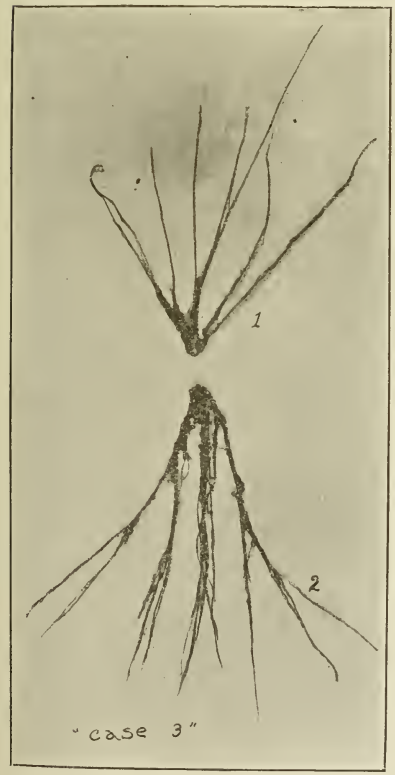
Proximal roots blocked, antrum of Highmore opened and curetted, old granulations.

Postoperative History.—There has been no recurrence of neuralgia over the distribution of the supra-orbital nerves—now a period of over seven months. However, we note that neuralgia persisted over the distribution of the spheno-palatine branches of the infra-orbital nerve. After two injections of the spheno-palatine ganglion reached above the zygoma by passing a needle at right angles forwards and inwards two and a half centimeters behind the angle of the orbit. The patient has been relieved of neuralgia in these branches for four months.

Case 4.—Mr. J. J. R.—Mobile Infirmary, August 10, 1912. Referred by Dr. Le Barron, Gulf Port, Ala.

Bitaltial avulsion of both supra- and infra-orbital divisions of the tri-facial nerves. Proximal roots blocked.

This patient has suffered from tri-facial neuralgia of both supra- and infra-orbital division of both nerves for seventeen years. The attacks occurred in increasing severity and frequency. For several years the patient has been addicted to the use of morphine and alcohol.



Case 3. Actual specimens—slightly reduced.
1. Left supra-orbital nerve.
2. Left infra-orbital nerve.

Case 4. Actual specimen—slightly reduced.
1. Right supra-orbital nerve. Note that only one of the terminal divisions was avulsed.
2. Left supra-orbital nerve.
3. Right infra-orbital nerve.
4. Left infra-orbital nerve.

Postoperative History.—There has been no recurrence in pain in the distribution of either supra-orbital or the left infra-orbital, now a period of over seven months. For one month after the operation the patient complained of neuralgia over the labial distribution of the right infra-orbital. We have been unable to obtain accurate post-operative data on this case and the above postoperative statement is given from information received indirectly.

Conclusion.—The temporary relief obtained in all of these cases in periods from seven to thirty-three months, together with apparent permanent cure in one case operated on nearly three years ago, certainly justifies us in attempting this procedure in preference to the ganglion operation in cases of tri-facial neuralgia.

202 Conti Street.

The Toxicity and General Insufficiency of Quinine in the Treatment of Malaria.

By S. P. Lathrop, New York City.

I am in a position which brings me in close touch with thousands of physicians throughout the world. In correspondence with them in relation to the malaria or fever question from a tropic-hygienic point of view, I have been more than surprised at the general concurrence of opinion concerning the effects ultimately following the use of quinine, and its inefficiency in the treatment of many cases of malaria.

The eminent malarial expert, Ronald Ross, states that quinine will not destroy all the malarial parasites in the body *unless it is given in sufficient doses and continued for several months.* Many physicians, however, claim that such treatment will only inhibit, *for a time*, the functional activity of the parasites and, consequently, effect but a temporary cure. Be this as it may, the patient under such treatment usually comes out of the attack greatly reduced in strength, pale, trembling, nervous, with jaundiced eyes, beating heart, singing ears, impaired hearing, an irritated alimentary canal, a depressed condition of the cerebral and spinal centers, defects of vision, etc., and subject to a relapse.

To these results has now been added the proven danger of tetanus supervening hypodermic or intramuscular administration of quinine.

Hitherto, when tetanus has followed quinine injections, the infection has almost invariably been attributed to the use of a dirty septic syringe, or to a contaminated quinine solution, or to the want of proper sterilization of the skin at the seat of inoculation. Consequently, for obvious reasons, medical men who have had the misfortune to meet with such an outcome, say little or nothing about it. So long as such conditions prevail, all statistical information regarding tetanus following quinine injections is necessarily vague, incomplete and unsatisfactory.

This whole question, however, has assumed an entirely new aspect from the recent exhaustive researches of Lieutenant-Colonel Sir D. Semple, Kt., M.D., Director, Central Research Institute, Kasauli, India,[1] which indubitably establish the fact that quinine is a potent factor in the development of tetanus when given hypodermically to a patient who harbors tetanus spores in the intestinal tract—a condition which often prevails in perfectly healthy persons—or where the spores have lain dormant, possibly for years, in some old healed up and long forgotten wound.

As Prof. Maclean[2] well says: "There is something revolting in a death brought directly or indirectly by a remedy intended to cure."

Sir Semple's experiments demonstrate the fact that the tissues at the site of the injection of quinine are invariably destroyed, thus producing a most favorable local anaerobic for the propagation of tetanus bacilli, irrespective of how, or by what means, they found their way to the place of inoculation.

Vincent[3] long ago proved that the physiological action of quinine has a paralyzing effect upon leucocytes and prevents phagocytes from successfully coping with tetanus spores. Therefore, a vital consideration to be taken into account before giving quinine hypodermically, is the already anemic condition of the patient resulting from the malarial attack, since the administration of the drug inevitably further weakens the system to most infections, tetanus included.

It seems strange indeed that the evil relationship existing between intramuscular injection of quinine and tetanus was not suspected long ago, especially so since tetanus rarely, if ever, follows the hypodermic injection of cocaine, digitaline, morphia and other solutions, in the administrations of which the most hazy notions of asepticism often prevail, and where the syringes are apt to be more foul, the solutions more contaminated, and the skin more septic than when quinine is injected.

Sir Semple's investigations, anent the influence of quinine in the production of tetanus, are most exhaustive, covering, as they do, nineteen long series of experiments. They conclusively demonstrate that quinine, when hypodermically injected, is a most dangerous weapon with which to combat malaria, as it encourages the develop-

ment of tetanus in three ways:

1st. The local destruction of tissues at the seat of injection.

2nd. The paralyzing effect of the drug on phagocytic activity.

3rd. The physical deterioration and depressed condition which supervenes the administration of the drug, thus lowering the resistent power of the already weakened system against bacterial or protozoan invasion.

The results of Semple's experiments made upon monkeys, guinea pigs and rabbits, may be summarized as follows:

1. Rabbits and guinea pigs are susceptible to the action of quinine when given hypodermically, or by stomach. A large dose produces muscular spasms, convulsions and death by asphyxia.

Rabbits are very susceptible to small doses of quinine given intravenously. Three-quarters of a grain per kilogram of rabbit is a certain lethal dose, and kills in most cases within one minute, asphyxia being the immediate cause of death.

The fatal r sults in such cases are directly due to the quinine itself, and not to the acidity of the solution. This is evidenced by the fact that the intravenous injection of dilutions of sulphuric or hydrochloric acid of much greater acidity than the solutions of quinine were less fatal in their results.

2. When quinine is injected hypodermically into the muscles, it has a well marked destructive action on the tissues at the site of the inoculation; and in addition to producing these foci of dead tissue which would serve as suitable anaerobic media for the growth of tetanus spores should they by any chance become lodged there, it also gives rise to conditions favorable for infection with "washed tetanus spores" injected in other sites.

3. When quinine is given to tetanus infected subjects, tetanus germs are transferred from the original site of the tetanus infection to the site where the quinine has been injected. The experiments on this point confirm those carried out by Vincent in 1904.[3]

4. Pure "washed tetanus spores" given hypodermically to guinea pigs and monkeys do not produce tetanus; but when quinine is injected hypodermically into a different part of the body, either the day before, the same day, or the day after spores are given, a large percentage of these animals contract tetanus.

5. Pure "washed tetanus spores" when mixed with quinine or weak lactic acid, and injected hypodermically into guinea pigs, invariably produce tetanus, but when the spores are mixed with morphia, the animals remain well. Quinine and lactic acid when injected hypodermically produce sites favorable for the development of tetanus spores; but morphia and normal saline solutions do not produce this effect.

6. Pure "washed tetanus spores" when hypodermically injected into guinea pigs remain latent at the site of injection for months, as evidenced by the fact that virulent tetanus bacilli may be recovered from these sites after a period of seven months, and very possibly for years. The importance of this fact is evident when we remember that almost invariably tetanus was developed in such cases by the hypodermic injection of quinine, irrespective of how the tetanus spores found their way to the point of inoculation.

7. Tetanus bacilli or tetanus spores are not found in the blood and internal organs in cases of acute tetanus, although they are invariably found at the original site of infection, and always at the site of quinine injections given during the disease.

8. Tetanus infection was found present in the intestinal tract of perfectly healthy human subjects in four cases out of ten. In three of these four cases virulent tetanus bacilli were isolated.

9. The hypodermic injection of quinine aids and abets the influence of cold in producing tetanus when "washed tetanus spores" are given hypodermically.

The salt of quinine used in almost all of Sir Semple's experiments was the bihydrochloride, and in the form of tabloids as prepared by Burroughs, Wellcome & Co., London. No evidence could be obtained of the presence of tetanus infection in any of the solutions of quinine used by him in his experiments.

As previously stated, for very obvious reasons, but few cases of tetanus following hypodermic injections of quinine have been, hitherto, reported by physicians. In view, however, of the results of Semple's researches and since the suspicion of careless administration, unsanitary syringes, contaminated solutions, etc., is largely done away with, there can be no doubt that in the future such reports will become increasingly numerous. There are fortunately, however, a sufficient number of cases on record to corroborate and justify the conclusions of Semple that tetanus is often corollary to the administration of quinine when given hypodermically.

Maclean[2] makes mention of six cases occurring in India, the details of which were brought to his attention and called forth the remark already quoted: "There is something revolting in a death brought about directly or indirectly by a remedy intended to cure."

Vincent[3] cites eleven cases of tetanus following upon injections of quinine among the French in Madagascar, and makes mention of a number of other cases reported to him by other observers.

Semple[1] had ten cases brought to his immediate notice in India alone.

In summarizing the results of his observations in treating 429 cases of malaria in the General Hospital, Madras, Lt.-Col. C. Donovan, M.D., B.A., R.U.I., B.A.O.,[4] states: "My hospital and general practice have taught me to place no reliance on intramuscular injection of quinine." In closing his paper, which was presented before the great Imperial Malaria Conference, held at Simla, India, Donovan utters a note of warning against the indiscriminate use of quinine in any of its forms for long periods, saying: "It is not to be forgotten that permanent damage has resulted from the misuse of the alkaloid for a long time, for instance, permanent deafness, defects of vision, etc., and last, but not least . . . the occurrence of tetanus resulting from hypodermic injection of quinine."

When we come to consider the question of the general insufficiency of quinine, aside from its toxicity, in the treatment of malaria, we must face conditions as they actually exist in every day practice. I shall, therefore, treat this phase of the subject from a practical point of view rather than from an academic one.

It goes without saying that a truly scientific physician, when he comes to investigate a subject such as this, lays aside preconceived ideas and cherished notions, and willingly makes a self-surrender to the self-evident. Facts are stubborn things, and those presented in this paper cannot be evaded, misconstrued or ignored.

The eminent malarial expert, Major S. P. James, M.R.C.S., L.R.C.P., Statistical Officer to the Government of India, in discussing the "Problems Related to the Use of Quinine,"[5] states: "It is the experience of nearly all observers that quinine given when the blood contains only endoglobular parasites often prolongs the paroxysms of fever and *may convert a simple definitely intermittent fever into one that is almost continuous.* It is now nearly 20 years since Marchiafava and Bignami pointed out that if large doses of quinine are given when the blood contains only pigmented parasites in process of development, the result may be the appearance of numerous sexual forms of the parasites instead of the usual asexual forms . . . . . It is possible, therefore, by administering large doses of quinine more or less in a haphazard manner, that we may not only be placing the patient in such a condition that he is very liable to relapses, but *may be increasing enormously the sources from which anopheles mosquitoes become infected.*" (Italics mine).

This occurrence of the abundant propagation of sexual reproductive plasmodia after large deses of quinine has also been recently observed by Italian authorities and commented upon. It is a very common occurrence for practitioners to find myriads of cresents in the blood of patients after administering quinine in large doses for a long time. This phenomenon, as suggested above, is due undoubtedly to the administration of quinine when the blood contained only pigmented parasites in process of development. It is of course understood that quinine is immediately fatal to only one stage of the sexual forms of malarial parasites, i.e., to that stage which immediately follows sporulation. Administered at any other stage, it is either inoperative,or tends to prolong the paroxysms of fever, or to convert it into a continuous one.

It is also claimed by some that the administration of certain salts of quinine lessens the power which the red corpuscles have of resisting haemolysis, and the question of the relationship between quinine and blackwater fever is considered by many as a dubious one which needs clearing up.

As Major James[5] well says: "if quinine were immediately fatal to all forms and stages of the malarial parasite, the treatment of cases would be exceedingly simple, and deaths of malarial patients who had received quinine would be almost unknown. Unfortunately, however, the matter is very complexed, the success of the drug depending upon a number of factors about which we know little or nothing at present." In closing his very able paper, Major James most strenuously combats the absurd view held by many, that all the really useful knowledge upon malaria and the methods of preventing it have been discovered, and declares, "that upon the question of quinine, about which there ought to be a mass of accurate information, there is, in reality, extremely little."

The best authorities agree that the *minimum* period required to effect a cure with quinine when the drug is taken *every day* without fail, is *four months*, and that to insure anything like a permanent success,the treatment should be continued *six months.*[6]

Now, most practitioners realize that the continuous use of quinine, even for a short time, is inconvenient and disagreeable to the majority of patients, and practically impossible to maintain in general practice. For them to order quinine is one thing; to get it taken faithfully, systematically and continuously is altogether another thing. While this is true, still many medical men

have found persons who have taken quinine regularly for a long time, and who, in spite of same, have *contracted* malaria. Most practitioners in malarial districts have come across case after case where the continuous and systematic administration of quinine has failed to eradicate the malarial parasites or to inhibit their functional activity.

Such failures are hard to account for, and they have raised in many quarters the interesting question, if there is not indeed being developed a race of quinine-immune parasites capable of producing myriads of protozoan descendants in the human body which retain this quality of being quinine-immune.

That this is a possibility is evidenced by the fact that Giemsa and v. Prowazek succeeded in obtaining races of Colpidia that could live in fairly strong solutions of quinine, and the infusorian Stentor kept in a weak solution of corrosive sublimate soon become tolerant of a solution containing four times the quantity of the poison that is fatal to stentors taken from pure water. Then again, trypanosomes dosed with atoxyl very often developed in an animal a race of trypanosomes that is immune to that drug, and they in turn produce atoxyl-immune descendents in animals that become inoculated. Consequently, as Lt.-Col. J. T. W. Leslie, B.B., C.I.E., states, "since the parasite of malaria is far more closely adapted to its normal surroundings than the protozoa mentioned (above) it seems possible that quinine-fast plasmodia may be produced."[7]

In this connection it is noteworthy to observe that Darling[8] in his study of some of the factors concerned in the transmission of malarial fever, demonstrated that the systematic routine administration of quinine to patients has no destructive or inhibitive effect on the parasites in mosquitoes fed exclusively upon the malarial infected patient, because the zygotes go on to maturity and sporozoites appear in the salivary glands of the mosquito in from nine to eleven and one-half days.

Whoever has studied the recent researches into the fate of quinine in the human body must realize how little after all is actually known about *the ultimate results of the quinine treatment.* Turn which way he may, the practitioner finds his path beset with difficulties and perplexities, which, like the armed men of Cadmus, spring up on every hand.

This whole question has taken on fresh interest on account of the remarkable research work of Prof. Charles Cassedy Bass of the Tulane University School of Tropical Medicine, wherein the malarial plasmodia was successfully cultivated on artificial media outside the human body, i.e., *in vitro*. Since Bass' experiments demonstrate that many generations of the malarial parasites can be propagated from the parent culture, and can probably be maintained indefinitely, it becomes barely possible that races of malarial protozoa may yet indeed be propagated in test tubes which can live in fairly strong solutions of quinine like the races of Colpidia developed by Giemsa and v. Prowazek. It is likewise probable that the cultivation of the malarial parasites *in vitro* may enable the learned professor to determine the comparative parasiticidal properties of quinine and other drugs.

Bass' experiments prove that the malarial parasites can live only when they are kept in a composition containing certain definite constituencies of the blood, and that they die when such elements are removed. This remarkable finding opens up an entirely new theory concerning the treatment of malaria, and it is believed that ere long the fact will be established that by giving a malarial patient certain food elements and eliminating others, that the parasites may, so to speak, be "starved" in the human host, and thus rid the system of the infection. In other words, it becomes barely possible that certain foods or drugs may possess the power of altering the constituency of the blood in such a way as to make it impossible for the plasmodia malariæ to exist in same. Be this as it may, the research work of Bass undoubtedly ushers in a new era in the history of the haematozoa of malaria, and will result in solving many of the hitherto perplexing problems connected with malarial fevers.

All fair-minded practitioners will grant that patients treated for malaria in private practice, are not so apt to take quinine *when* prescribed, and *as* prescribed, as are patients who are systematically treated in hospitals where they are under constant attention. It is, therefore, self-evident that patients treated with quinine in private practice, are, at least, as apt to have a relapse as are cases systematically treated in hospitals.

What conclusion then must the practitioner come to when he studies the elaborate research work of the eminent malarial expert, Prof. A. Caccini, who was entrusted by Prof. Ballori, Director General of Hospitals in Rome, with the care of a special department for the study of malaria, and who undertook the task of examining, in a thorough and methodical manner, several thousand cases of malaria treated with quinine?

The cases thus studied by Caccini[9] were as follows:

TYPE	1ST ATTACK	RELAPSES	TOTAL
Quartan.....	525	330	855
Benign Tertian	1086	934	2020
Malignant.....	2275	1429	3704
Totals	3886	2693	6579

Prof. Caccini's experience in benign tertian malaria treated with quinine was as follows:

(1) A relapse occurred in *thirty-seven per cent.* of cases where quinine was systematically given on alternate days in doses of 1.5-2.0 grams per day in three or four doses, given at intervals of one half hour between doses. The treatment commencing three hours before the paroxysms were due.

(2) A relapse occurred in *eighty per cent.* of all cases treated with quinine when administered at height of fever.

(3) A relapse occurred in *eighty per cent.* of all cases in which quinine was given during the sweating stage.

(4) A relapse occurred in *eighty-five per cent.* of all cases in which quinine was administered irregularly.

When it came to the treatment of malignant fever, Caccini's experience proved that relapses almost invariably occur in spite of the most energetic quinine treatment. He cites the case of 90 work-people who were discharged from the hospital after being temporarily cured, and 792 patients kept in the hospital for thirty days; *all* of the former and over *ninety-six per cent.* of the latter relapsed.

He also cites the case of a band of 62 workmen who were systematically treated by him with quinine from July to December, every one of whom had relapses after being exposed to a severe rain storm many months after being discharged as cured.

Caccini's exhaustive investigation proves beyond controversy:

(1) That quinine, when systematically administered to a degree, practically impossible in private practice, falls far short of being the *specific remedy* for malaria it is generally thought to be.

(2) The malarial parasites in a vast majority of cases begin to multiply again the moment the quinine treatment is stopped; consequently it is but a question of time when they would increase sufficiently to produce another series of attacks.

(3) Quinine treatment has no effect on the occurrence of such relapses.

As every practical physician knows, the food of the malarial parasites is the haemoglobin in the red blood corpuscles. As stated by Ross[6] "the parasites live within these corpuscles at the expense of the haemoglobin of which they are mainly composed, somewhat as a grub lives within a nut." It follows, as a matter of course, that under such conditions an attack of malaria greatly reduces the oxygen-carrying power of the red blood corpuscles.

Since, as shown by Semple and Vincent, quinine has a pernicious influence upon phagocytic activity or mobility, it is a physiologic sequence that the administration of quinine in malaria must necessarily further inhibit the oxygenating power of the blood and reduce the capacity of the entire system to resist parasitic invasion. Is it strange then that so many cases of malaria treated with quinine degenerate sooner or later into chronic anaemia, cachexia, etc., the sequel of which is so often pneumonia, consumption, dysentery, etc., etc?

The medical world, I believe, is but awakening to the realization of the fact that quinine is not only a failure as a *cure* for malaria, but that it is also often a potent drug for evil doing, *ultimately* more harm than good. The mass of correspondence which I have had with medical practitioners from all quarters of the world plainly manifest the growing prejudice against quinine, and the crying need for a remedy that is potent in the elimination of the Plasmodium Malariae from the blood, but which has none of the idiosyncrasies of quinine.

That such a remedy has been found in the extract of Cuminum sinensis, a hitherto unknown variety of the Ammiales, Apiacae family of plants, found growing in Yunnan, China, is indicated by recent researches and clinical tests made in the governmental hospitals of Italy, and confirmed by a large number of American physicians who have demonstrated its therapeutic efficacy in the treatment of malaria

Eminent chemists and able pathologists are now engaged in determining the constituent elements and active principles of Cuminum sinensis, and its physiological action. The results of these investigations will undoubtedly be given, shortly, to the medical world.

I trust this paper will result in a useful discussion on the merits and demerits of the quinine treatment, and lead to the determination of the question if the failure of its use in so many cases, and the toxic properties it so often manifests, are due to the drug itself or to the lack of knowledge regarding the correct way to employ it.

(1) Semple: "The Relation of Tetanus to the Hypodermic or Intramuscular Injection of Quinine."

(2) Maclean: "Diseases of Tropical Climates," page 69.

(3) Vincent: "Annales de l'Institut Pasteur" 1904.

(4) "Proceedings of the Imperial Malaria Conference" Government Central

Branch Press, Simla, 1910.
(5) " " "
(7) " " "
(6) Ross: "The Prevention of Malaria," page 142; "Summary of Facts Regarding Malaria," page 6.
(8) Darling: "Studies in Relation to Malaria," page 32.
(9) Caccini: "Sullo sviluppo e sul decorso delle epidemie malariche degli anni 1900-1901 studiate nell'Ospedale di S. Spirito."

Ectopic Gestation.*

By Samuel Lile, M.D., Lynchburg, Va.

To the general practitioner no subject in the whole domain of his professional work should excite a livelier interest.

The mysterious fact that an ovum can become fertilized and grow in or on foreign soil should never be overlooked, for failure to recognize the condition before it is too late may rob a poor woman of her life. For these reasons, and because such cases usually fall first under the care of the general practitioner, he should know what signs point to, what course is usually pursued and the outcome if such pregnancies are not interrupted by the surgeon. Nor should he be slow or timid about referring them to a surgeon.

Extra-uterine pregnancy is now known to be comparatively common, and should be suspected in all early pregnancies pursuing an abnormal course. In the early stages these cases all belong to the general practitioner, but as I stated in my paper on this subject read at our last meeting at Charleston, South Carolina, there being no medical treatment for such patients, they should be very promptly transferred to the domain of the surgeon. Howard Kelly says "if it were possible, it would be best for these patients in all cases if all could be classified as surgical from the outset." This is the ground I took in the paper above referred to, and a celebrated gynecologist from Philadelphia took issue with me and thought I was wrong; at present I know of no one entitled to speak authoritatively who will do so.

Pregnancy may take place in almost any part of the Fallopian tube or in the ovary. Strictly speaking an extra uterine pregnancy is caused by anything whatever which prevents the fertilized ovum from passing through the tube into the uterus, such as tumors, adhesions, kinks, twists, partial occlusion of the tube resulting from salpingitis or pyosalpinx, etc.

Ectopic gestation occurring once may occur again in the same subject.

But a few years ago it was a generally accepted fact that extra-uterine pregnancy was a very rare occurrence. Now it is known to be rather common or frequent. Formad claims to have found thirty-five in thirty-five hundred postmortems, or one to each one hundred.

We know, too, that it may occur in any part of the tube where the lumen of the tube has become closed or partially closed, just so the obstruction is sufficient to prevent a fertilized ovum from passing down into the uterus. At this obstructed point it remains and begins its period of development.

Any woman is liable to develop an extra-uterine pregnancy during her child bearing period, whether she be multiparous or nulliparous. This being the case, Kelly says that "all deviations from the normal pregnancy should excite the liveliest attention on the part of the responsible medical attendant."

The surgeon should be as well posted on the subject as the general practitioner, so as to be able to refute or confirm the diagnosis, but he usually sees the case late, and I regret to say often too late. In the matter of the operative work no surgeon knows just the steps to be taken in the operation until the condition is exposed to touch and vision.

Ovarian Pregnancy.—Ovarian pregnancy is really very rare, and just how the ovum after being impregnated is held within the ovary has not yet been fully determined, but there must be some obstruction to its being grasped by the fimbriated extremity of the tube or something preventing it leaving the ovarian tissue, and there it is held and begins development just as though it was in its natural nidus, and continues to grow until rupture takes place, which is certain within a comparatively short time.

Literature is very meagre on the subject of ovarian pregnancies, many of the best authorities claiming it to have been originally a tubal pregnancy which aborted through the fimbria into the ovary; but may I ask how into the ovary, how did it get in? If the ovum became impregnated within the tube as usually thought, how could it from there get within the ovary. It has been said that the spermatozoon finds its way through the fimbriated extremity of the Fallopian tube into one of the small recently-ruptured cysts so frequently found on the surface of the ovary and that it there coalesces with the ovary.

Would it not be more rational to suppose that the spermatozoon finds its way through the fimbriated extremity and then to the follicle left by the expulsion of the *ova* and in this way met an unexpelled ovum and

*Read at the Norfolk meeting of the Tri-State Medical Association, 1913.

impregnated it, the ovum having been delayed in its expulsion from its nidus in the ovary.

The signs and symptoms of ovarian pregnancy do not differ materially from the usual extra-uterine type.

I wish especially to report a case of undoubted *ovarian pregnancy*, and will endeavor to show wherein there is no question as to its location.

I shall not rehash the signs and symptoms of ectopic gestation, as I feel sure it would only be tiresome to my audience. Suffice it to say that all ectopic pregnancies terminate by rupture and come sooner or later to the surgeon for operation if the patient survives the period of rupture and the consequent hemorrhages. Very few unquestioned cases of ovarian pregnancy have been reported, and many of our authorities doubt the probability or the possibility of such.

Belief in ovarian pregnancy can be traced back for quite 200 years, but careful examination of the reports of recorded cases shows them to have been either dermoids or pregnancies in the broad ligament after having been thrown out of the tube by rupture.

Investigators of recent years formulated a postulate on which the occurrence of ovarian pregnancy could be based; they urge that, in order to satisfy their doubts, an *early embryo in its membranes, contained in a sac within the ovary*, should be forthcoming.

J. Whitridge Williams, Johns Hopkins Hospital, in his work on obstetrics says, "In only five cases has the primary ovarian character of the pregnancy been conclusively demonstrated; in none of these was there any doubt concerning the anatomical conditions," and he says this after a close search of the existing literature for the past one hundred years.

A young woman twenty-seven years old, married nearly three months, was referred to me by my friend Dr. B. of Campbell county, Virginia, he having made the diagnosis of extra-uterine pregnancy with rupture. The only sign of pregnancy was the skipping of one monthly period just six weeks before I saw her, as stated by patiedt. Physical examination disclosed a tumor which could not be outlined owing to the great tenderness on palpating the abdominal wall. The uterus was high up but apparently in good position. Abdominal palpation could not be done, tenderness preventing, until the patient was anesthetized. Then quite a mass extending up to the umbilicus was found. There were the usual changes in the breasts, darkening about the areola, &c. She had been seized with sudden pain in the right iliac region, falling to the floor and when the doctor arrived he saw signs of internal hemorrhage, which continued until she fainted. Having been acquainted with the skipping of her period and feeling the hard mass, the tenderness above referred to not having then developed, he determined at once that he was dealing with an extra-uterine pregnancy. As soon as arrangements could be made she was hurried to the train and brought to the hospital that afternoon. On arrival her pulse was 160, temperature 100, and abdomen very tender to pressure, etc. The diagnosis was confirmed and she was promptly sent to the operating room.

The incision was made through the right rectus muscle. As soon as the peritoneum was opened fresh blood began to pour out. There was a mass extending upward to the umbilicus. The fetus with blood clots, etc., were first removed. No ovary could be outlined. The entire mass with a part of the broad ligament and tube were removed, and the operation then completed in the usual way. Her recovery was uneventful. The tissues removed were then carefully examined. The mass above referred to as running upward to the umbilicus was the ovary and was so edematous that water was squeezed out of it as from a sponge. On one side of the ovary was found a pocket, a previously ruptured sac, as large as a lemon, from the edge of which the blood was pouring. The placenta was quite firmly attached to this point of the ovary and was hanging from it. The tube was perfectly normal and was patulous throughout. No obstruction of any kind could be found therein or thereabouts. There were several of the small pedunculated cysts, so often found about the tube.

The broad ligament was normal in every way save for slight edema at one point to which there was a slight attachment to the ovary.

The ruptured ovarian sac was a fresh rupture, and fresh blood pouring from it at the site where the placenta had been completely torn away. There was no other bleeding point.

I regret exceedingly that I did not have a photograph taken of everything removed.

Report of an Interesting Case of Bilateral Congenital Cataract, in Patient 29 Years Old.*

By E. Reid Russell, M.D., Asheville, N. C.

A young woman 29 years of age, music teacher, was brought to me on November 21st, 1912. The history, as I have been

*Read before the Tri-State Medical Society at Norfolk, Va., February, 1913.

able to find it from my patient and her friends, is as follows: Father died during her babyhood, mother was operated on for cataract about one year before the patient's birth, with good result. Mother died of typhoid fever when the patient was about thirteen years old. The patient was blind from birth with what an eminent ophthalmologist called Congenital Cataract. At about the age of six years she was operated on by this same surgeon, at three different times. There was no vision from these operations and her mother was advised to put her in a school for the blind. This was done at the age of ten years. Here she remained for eight years, learning the things that are taught the blind, and music was her special study. After leaving the school she went to teach in a Mission School where she was employed as music teacher, when she came to me. About ten years ago she consulted a well known oculist, who advised against an operation, or told her that there would be no sight from the operation. The patient had suffered all her life from pain in her eyes and head. There was shadow perception at 12 to 16 inches in both eyes. Light perception was good. There was that curious symptom, rapid lateral nystagmus; both eyes seemed to be affected exactly alike. There was also retractive movements of the eye ball. Both eye balls were normal in appearance, with an iris that was very sluggish in responding to the light. Ordinary inspection showed a grayish veil in the pupil behind the iris, with tough looking bands. There was no reflex, even on dilating the iris with atropine. Under cocain anesthesia a discission of the right eye, as for iridotomy, was performed with a Zeigler knife; the patient was overjoyed to find that she could see. There was no reaction following the operation of this eye at any time. Three days later the left eye was operated on, in exactly the same way, with equally good result. Eight days later there was violent pain, high tension, cornea steamy, etc., in other words glaucoma. An iridectomy was done with relief from pain. The right eye has given no trouble since the operation, with the exception of photophobia. This has been more or less marked in both eyes. She has been able to come unattended to my office for the past ten days, four weeks after the last operation. Amber tint glasses were used after the removal of the dressing. She talks very interestingly of what she sees and how she sees. She said that all was confusion, and she was so excited and nervous that for awhile she was not sure, but that it was all a dream. Her ocular judgment is not very good; she had no idea of distances, nor of colors. Colors were more of a revelation to her than anything else. She thought everything beautiful—the snow, the blue of the sky, mountains, etc. She could recognize certain letters in the alphabet, but not many. She spent six weeks under my care. At the end of that time the vision was 20 200 with A 10 D.S. in both eyes, she can read with A 3 D.S. added, even Jæger No. 2. I have been very careful that she does not use the eyes at all for near vision, but she has used them some. The temptation has been great. I have not made a very thorough test of the eyes for glasses as I thought it best not to do so. Where both eyes are congenitally ambliopic, nystagmus will result, nystagmus means some, but, congenital poor sight; so this case, probably, did have some vision in babyhood, if so neither patient nor mother were aware of it. Worth says that a child with good vision in each eye, who develops a constant unilateral squint at the age of 6 or 18 months, will in the absence of treatment become rapidly blind in that eye. After 6 years of age ambliopia exanopsia seldom takes place. The correction of a squint and the operation for congenital cataract should be attended to at the earliest possible time. If one had another wise normal eye and visual pathway and should have a cataract removed late in life vision would be good, but ocular judgment poor.

February 10, 1913, nearly three months after the last operation, my patient returns; the eyes are free from inflammation, the nystagmus not so marked, the retraction of the internal muscles is as much as ever, the general health much improved. She has some photophobia and some pain occasionally in the left eye. The tension of the left eye remains elevated, the media of each eye is clear, there is some excavation of the nerve head in each eye and the arteries seem a little smaller than normal, while the veins are larger than they should be. The nerve head is a little too light in color. Irido-choriditis is also to be thought of in this case, as this may occur several years after discission. The patient's vision seems to be practically better than the test would indicate. I believe this will improve, unless some intra-ocular trouble causes the reverse. At the same time ocular judgment may be poor in a case of this kind. I have given no glasses with the exception of the dark amber tinted ones that she has used since the dressing was removed. The medical treatment has not been neglected in this case, but has not been mentioned for fear of making the report too long. The treatment was along that course usually employed in such a case.

Stenosis of the Pulmonary Valve of the Heart with Tuberculosis of the Lungs as a Secondary and Terminal Complication—Report of Case.

By Lewis M. Gaines, A.B., M.D., Atlanta, Georgia.

Although pulmonary stenosis is the commonest of all congenital cardiac defects, it is of sufficient rarity to warrant careful consideration in each individual case. Furthermore, in cases occurring without the typical cyanosis of the classical congenital heart disease, the diagnosis is of extreme importance on account of the grave prognosis, and the fact that if precautions are taken there is strong likelihood of prolonging life a number of years by guarding the individual against infection, especially that of tuberculosis.

An ideal classification of this condition is difficult. Cases of atresia are to be distinguished from those of stenosis, with which this paper is dealing. The atresia cases die very soon after birth and constitute the typical "blue babies." Rauchfuss bases his classification of pulmonary stenosis upon the presence or absence of defects in the interventricular septum. He takes this to have an important etiological bearing on the problem of deciding at what stage in embryonic or fœtal life the stenosis took place. If there is a defect, the probability is that a developmental error occurred very early in fœtal life. If no defect of the septum is present, it is taken to indicate inflammatory processes in a stage of fœtal life after the heart has been fully formed.

In regard to the frequency of pulmonary stenosis, the statistics are said to be inexact. In 1898 Vierordt estimated 300 cases. Among 181 anomalies of the heart, Peacock found 119 of this condition. In 579 cases analyzed by Kussmaul, Rauchfuss, Peacock, Vierordt, Theremin, and Abbott 26 per cent. are cases of atresia, 74 per cent. stenosis.

Defect of the interventricular wall exists in a large percentage of the cases, especially in stenosis. Thus Rauchfuss finds among 192 cases 171 in which there is defective interventricular septum, 21 closed. Of the latter number 10 are atresia, 11 stenosis. In the stenosis cases the ductus arteriosus is nearly always closed. "Rechtlage" of the aorta is very frequently present in association with septal defect, especially in atresia.

From the standpoint of pathological anatomy two general types of stenosis are described. In the first and smaller group of cases the stenosis is practically entirely valvular and suggestive of a pre-natal inflammatory process, the valves being thickened, shortened and even fused. The pulmonary artery is dilated above and thin walled, while below the conus is normal except perhaps for its general share in the right ventricle hypertrophy. In the second and larger group of cases, the stenosis is due not so much to valvular deformity as it is to a rudimentary condition or deformity of some part of the pulmonary tract. Septal defect is almost the rule in this type, while "rechtlage" of the aorta is common. Such a combination strongly suggests developmental origin.

According to Abbott, two types of conus are described. (1) The whole infundibulum is constricted, the musculature thickened, the pulmonary cusps delicate and healthy above the stenosis, but both they and the artery very small. Frequently, however, the valves are thickened and fused, often bicuspid. The artery is often short. In these cases septal defect is stated to be almost invariably present. (2) In the other group of conus deformity, a cavity resembling a third ventricle is cut off from the sinus of the right ventricle by a definite perforated septum. This form is relatively infrequent.

Symptoms.—The majority of cases present the classical symptomatic picture of congenital cyanosis. Indeed "Morbus Coeruleus" and pulmonary stenosis may almost be considered synonymous terms. However, the clinical symptoms vary with the variety of the deformity and the degree of narrowing. In stenosis with closed septum, cyanosis may be slight or absent, the duration of life considerable, and the difficulties of diagnosis increased. In such cases, where the individual has reached or passed the age of puberty, there is a striking lack of general bodily and mental development.

Physical Signs.—The physical signs are often indefinite or confusing, but the most suggestive are the following: (1) An increase of cardiac dulness to the right. This is often difficult to demonstrate, though a greater or less degree of hypertrophy of the right ventricle is to be expected in all cases which survive any length of time. (2) Praecordial bulging. (3) Intense cardiac impulse. (4) Thrill, most marked usually over the second and third left interspaces, but frequently fairly diffuse. Thrill, however, is not so frequent a sign as one might suppose, being present in only sixteen out of seventy-five cases. It was absent in my own case. (5) A prolonged, harsh rasping or perhaps blowing systolic murmur, heard over the whole cardia, sometimes over the whole chest front and back. The maximum intensity of the murmur is usually over the pulmonic area, and the sound is frequently transmitted a short distance upward along the pulmonary artery. The maximum sound may however be heard at

the apex, or over the left nipple, or along the aortic area and extending to the carotids. Occasionally physical signs may be absent as in the case of a child of 5, with large septal defect, rudimentary valves, and the pulmonary artery a small cord. The heart sounds were reported clear in this case.

In regard to the course of the disease, the duration of life is relatively high. Peacock records a case surviving at the age of 45 years. The majority, however, die before the age of twenty. A very large number of the deaths are due to pulmonary tuberculosis, to which disease the unfortunate subjects of this form of heart disease are peculiarly susceptible. This susceptibility has been attributed by some to the undue anæmia of the lung, by others to the cyanosis which they suppose depresses resistance, and favors destructive tissue metabolism. The individuals live to just the age when tuberculosis is most likely to invade a receptive soil, whether this soil has been prepared by anæmia or cyanosis. Another mode of death is acute endocarditis developing at the seat of the lesion.

One is apt to dismiss the treatment of a condition such as congenital stenosis with a shrug, but I conceive the prophylactic treatment against infection, particularly that of tuberculosis. to merit the closest attention. I have no doubt that many cases could have their lives prolonged if they are early diagnosed, kept in the best condition, and guarded carefully from infection.

I have the pleasure of presenting the following case of pulmonary stenosis, which presents some points of unusual interest:

L. F., colored, female, æt. 15 years, occupation, nurse; F. H:, uncle, has tuberculosis; father and mother dead, cause unknown. Lives with infirm grandmother under the worst possible hygienic arrangements.

P. H. Patient states she has never been strong, and has always had some cough. She passed successfully through attacks of measles and whooping cough. She gives no history, however, of any symptoms particularly referable to the heart, and though she was never robust, considered herself fairly well, and was engaged up to the time I saw her as nurse for a white family, doing considerable manual labor. She stated she had never menstruated.

P. I. The principal complaint is of cough and pain in the chest. Cough is marked and always has been a symptom, though worse for the past three years. Pain and tenderness is noticeable on the right side of the chest in front. Night-sweats have been present for several months. She has lost some weight, but does not know how much. Expectoration is copious. Hæmoptysis has occurred several times the past few months, the last one occurring the day before the patient presented herself. It was this symptom which caused her to seek advice. Appetite fair, digestion good. Sleeps well. Menstruation has never occurred, though the pains of menstruation have been present. Shortness of breath on exertion is fairly well marked. There has been slight œdema of the ankles.

P. E. Patient is an undersized, moderately emaciated, ill developed girl. Weight 78 pounds. Mental development about that of a child of eight years. No cyanosis is evident. The color of the mucus membranes is fairly good. The fingers are not clubbed, but rather thin and tapering. The breasts are rudimentary. Pubic hair almost absent.

Lungs: The right lung presents all the evidences of well advanced tuberculosis. It is dull on percussion throughout almost its entire extent, while medium and fine moist rales are everywhere present, and the breath sounds are typically broncho-vesicular. The left lung presents the signs of compensatory emphysema.

Heart: On inspection there is well marked pre cordial bulging. The apex can be discerned in the fifth interspace in the mamillary line. The pulse is beating at the rate of 120 per minute, and small in volume, not sustained. No thrill is detectible. On account of the surrounding lung dulness, the right border of the heart cannot be accurately outlined by percussion. On auscultation, there is heard over the entire chest in front an extremely harsh, rasping systolic murmur, which is of maximum intensity directly over the pulmonic area, and is loudly heard as high as the first rib above, and the apex of the heart below. It is not loudly heard to the right of the midline. This murmur which is of peculiar roughness entirely obscures the first sound in the pulmonic area. No other murmurs could be detected.

In view of the history and the association of tuberculosis, I felt justified in making the diagnosis of pulmonary stenosis of congenital origin, with secondary far advanced pulmonary tuberculosis.

On March 4th, about two weeks after the first interview, there was detected in the right external jugular vein, a venous pulse synchronous with systole, which was assumed to indicate relative tricuspid insufficiency, which condition was found to be present at autopsy.

The patient pursued the ordinary course of a far advanced uncared for case of pulmonary tuberculosis, doing an amount of manual labor surprising in one presenting

such evidence of cardiac as well as pulmonary changes. The temperature finally assumed the hectic type, the pulse varied between 120 and 140, the respirations between 30 and 40, the patient remaining up and about most of the time despite advice to the contrary. She finally died on January 2, 1910, about ten months after first coming under observation. The terminal events were not observed clinically.

Autopsy (limited to heart and lungs). For the performance of this autopsy under difficulties, my thanks are due Dr. E. C. Thrash, Professor of Pathology, Atlanta School of Medicine.

Heart: The heart is firmly bound to the pericardium by a large number of dense adhesions, so that it is impossible to remove the heart without tearing its substance. On examination of the right auricle, it appears normal except that in the fossa ovalis along its upper margin there appear three cribriform openings in the inter-auricular septum. The largest of these openings is 2 mm. in diameter, the other two about .5 mm. The edges of the tricuspid valves are greatly thickened along the insertion of the chordæ tendinæ, thus preventing perfect coaptation of the edges, on closure of the valves. The entire ostium venosum is so stenosed that the little finger can with difficulty be introduced to the base of the pulmonary valves from the cavity of the right ventricle. The pulmonary orifice is 8 mm. in diameter. The three leaflets of the valve are greatly thickened, and nodular from their base to near the margins, which furnish a surface smooth enough to permit accurate coaptation of the margins. Each leaflet is about 9 mm. in length along its free margin. The leaflets are three in number and not fused. The distance from base to free margin measured in the sinuses of Valsalva is 13 mm. Each of the three leaflets is thrown into folds.

There is no communication between the pulmonary artery and the aorta, both of which occupy their normal relative positions. The pulmonary artery is only 8 mm. in length, dividing into right and left branches. The vessel is about 1 cm. in diameter and very thin walled.

The mitral valve is competent, though there is some thickening along the marginal cusp.

The aortic valve is normal, each cusp measuring 20 mm. along the free margin, while the distance from base to free margin measured in the sinuses of Valsalva is 10 mm.

The inter-ventricular septum is intact throughout. The walls of the right ventricle are hypertrophied, measuring at the thickest part 13 mm., as compared with 15 for the left ventricular wall. The papillary muscles are much more strongly developed on the right side of the heart.

Lungs: Both lungs present the lesions of tuberculosis. Multiple cavities appear in the right lung, with a very small amount of air containing area, while the left lung presents the pathological picture of acute tuberculous pneumonia, throughout the greater part of its extent.

It will be seen that the heart just described hardly conforms to either of the two generally recognized types of stenosis most frequently met with. The absence of septal defect and rechtlage of the aorta should probably mean that the changes took place rather late in the development of the heart. On the other hand, there is a distinct hypoplasia, or rudimentary condition of the tract extending from the base of the right ventricle where the conus begins, on throughout the pulmonary artery. Finally, the thickening of the valves would seem to indicate inflammatory changes of a chronic nature.

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The Pathology of Symptomless Unilateral Hematuria of the So-called Essential or Idiopathic Type.*

By Dr. R. L. Payne, Jr , Norfolk, Va.

Until a few years ago I had held firmly to the tenets of my medical training, that hematuria from one kidney must be due to a new growth, stone or tuberculosis. All of the standard text-books of my student days taught that spmptomless hematuria was angio-neurotic in origin and not one of them told us that the disease could be unilateral. My attention was first called to this condition by the following case:

Report I.—J. C.; male; age 45. Complaining of several attacks of right-sided renal colic and constant bloody urine. Family and past history negative. Physical examination revealed a fat, well-nourished man with absence of any cardiovascular lesions. Both kidneys were in their normal position, neither could be palpated on deep inspiration and there was no tenderness on deep pressure in the loins. Cystoscopic examination showed a normal bladder with blood coming from the right ureter, and clear urine from the left. Ureteral catheterization showed blood, hyaline and granular casts from the right kidney, normal urine from the left. Bacteriological examination of the right specimen negative; x-ray showed an enlarge dright kidney and an indistinct shadow which we thought to be a stone. Operation revealed an enlarged dark kidney, lobulated with adherent capsule. Complete section from

pole to pole and down to the pelvis showed nothing except a congested cortex. The kidney was closed by mattress sutures and from that day to the present time the patient has been free from colic and hematuria.

In studying the literature I find numerous surgeons have had many such experiences and in searching for an explanation various reasons have been assigned as the cause of this most unusual condition. While Rayer, in 1841, mentions unilateral hematuria, Socoloff in 1874 (Berlin Klin. Woch. 1874, II. S. 233) first reported a definite case which he ascribed to an interference with the nerve impulses to the renal vessels —a condition which we now recognize as angio-neurotic œdema. Following this report, Sebatier (Revue de Chir., 1889, p. 62), Legueu (Ann. des Mal. des Org. Gen. Urinar, 1891, p. 564), and Broca (Gaz. Hebdomadaire, 1894, No. 50) record cases which they ascribe to this same angio-neurotic cause. Just about this time Senator (Berlin Klin. Woch , 1891, No. 1) came out with a powerful monograph refuting the cause of angio-neurosis and declaring local hemophilia to be the exciting factor in these cases of unilateral renal bleeding. Aiken (quoted by W. E. Lower) follows Senator and reports seven cases of hemophilia of the kidney, these cases representing three different generations of the same family. Guthrie (Lancet, 1902, I., p. 1243) reports twelve cases of renal hemophilia in the same family, the inheritance being entirely through the females. Atlee (St. Bartholomew's Hosp. Jour., Dec. 1901) reports three most unusual types of renal hemophilia. The arguments against the theory are that hemophilia is not a local process and these cases do not bleed from elsewhere; the condition does not follow injury and does not occur in families.

In 1897 Klemperer (Deut. Med. Woch., 1897, Nos. 9 and 10) created quite a stir among the internists by expressing his belief that the so-called essential or idiopathic hematuria is due to a paralysis of the vaso-constrictors with dilatation of the renal vessels and a resulting diapadesis. This condition he called angio-neurotic œdema of the kidney, and from this paper the various text-book writers received the impetus for the teachings so often found therein.

The first article of dependable worth came from de Keersmaecher (Ann. des Mal. des Org. Gen. Urinar , 1897, February), when he first called attention to inflammation in one or another form as the exciting cause of idiopathic hematuria and showed the definite entity of unilateral nephritis. Pousson (Assoc. Francais d'Urologie, 1900, p. 100) reports cases of symptomless hematuria in which he found inflammatory alterations in the glomerulus. Hofbauer (Mitt. aus dem Gren. der Med. u. Chir., bd. V, S. 423) also describes changes in the glomerulus. Laurent (Deut. Med. Woch., 1901, No. 13, S. 193) and Israel (Klinik der Nieren, Berlin, 1901) report cases of hyaline degeneration of the blood vessels, while Rovsing, of Copenhagen, (British Medical Journal, 1898, II., p. 1547) found circulatory disturbances and thickening of the capsule. Albrecht and Lowenhart (quoted by Albarran) describe interstitial lesions in the pyramids.

The most valuable contribution to nephritis as the cause of essential hematuria came from Kretschmer (Zeitschrift fur Urologie, 1907, I., p. 490) in which he collected 129 cases from the literature, 52 of which showed definite microscopic changes of nephritis. He principally found lesions of the glomeruli and desquamation of the epithelium in the convoluted tubules. Lower (Ohio State Med. Jour., October, 1910) reports two cases with nephrectomy in which the microscope showed nephritis. Casper (Arch. f. Klin. Chirurg. XXXI) writes that nephritis is at the bottom of all these cases, and if delicate tests for a sufficiently long time are carried out albumen and casts will be found; failing, the case may still be one of *nephrosis circumscripia*. In this connection Schuller (Wien. Klin. Woch., 1904, XVI, 477) and Israel (Klin. der Nier., Berlin, 1901) both say nephritis can exist without casts or albumen. Rigdon (Calif. State Jour. Med., November, 1910) reports two positive cases of nephritis as the exciting cause and argues that hematuria is the initial symptom of chronic nephritis. Schenck (Surg. Gyn. and Obstet., July, 1911) reports two cases showing nephritis. Kotzenbergs (Zeitschr. fur Urologie, 1908, 125) reports twelve cases which he believes due to a bilateral toxic nephritis. He thinks the hemorrhage in these cases is the initial symptom of the nephritis, but at the time of observation only one kidney showing blood. This is most untenable, for very rarely does the other kidney ever bleed.

Along with these cases, E. H. Richardson, in a personal communication to me records a case of bilateral hematuria relieved by a right-sided nephrotomy from which an excised piece of kidney showed parenchymatous nephritis.

Turning aside from the consideration of nephritis, we find Fenwick (British Med. Jour., 1900, No. 1, p. 248) describing angioma of the papillæ as the cause of the so-called essential hematurias and reporting six such cases. To support Fenwick we find McGowan (quoted by Lower), Pilcher (Annals Surgery, May, 1909),

Cabot (Amer. Jour. Med. Sciences, January, 1909), Whitney (Boston Med. and Surg. Jour., 1908, Vol. 158, p. 797) reporting similar cases, and Hale White (Quarterly Jour. Med., London, Vol. 4, No. 16, 1911, records five cases of angioma of the papillæ seen in Guy's Hospital. Rovsing (Ibid) and Israel (Ibid) both admit the presence of nephritis as a cause of symptomless hematuria, but argue that usually there must be some more definite cause for the bleeding and lay stress on tuberculosis, new growths and ascending infection. In this connection, Albarran (Assoc. Francais d'Urologie, 1900, p. 104), Kapsammer (quoted by Albarran) and Davidsohn (quoted by Albarran) report cases showing minute foci of tuberculosis. Albarran says the least lesion of nephritis is capable of determining the vascular or angio-neurotic modification capable of leading to bleeding. Rovsing (Ibid) says local infection plays a more important part than toxins in the production of the nephritis, and Chute (Amer. Jour. Urology, Vol. III., 1907) argues that the nephritis may be toxic or infectious. He further says the infectious type may show blood and pus or an absence of pus with inflammatory changes remaining in the kidney after the infectious agent has disappeared. Billings (quoted by Lower) reports a few infectious cases due to colon bacillus which were treated successfully with autogenous vaccines. Squier (Jour. A. M. A., December 2, 1911) reports a case relieved by nephropexy, but a careful study of his report would force the burden of cause of cure upon the nephrotomy; the evident cause of blood and pus being an unilateral nephritis of infectious origin.

Since my first case I have personally observed four other cases in my private work, as follows:

Case II.—Male; M. L. J.; age 40; farmer. Giving a history of persistent bloody urine for past year with dull pain in right loin. X-ray and physical examinations negative. Cystoscope showed a normal bladder with blood in abundance from right ureter. Microscope disclosed hyaline and granular casts from the right specimen, with absence of bacteria, while the findings were negative in the left specimen. Operation upon the right kidney showed an organ normal in appearance and size. Bisection disclosed a narrow dark cortex, considerable congestion between the pyramids, with a few small clots in the pelvis. The kidney was closed with mattress sutures and after the fourth day the urine became clear. The patient gained rapidly in weight and has had no pain or hematuria since his operation. Three months after operation the urine showed no albumen but a few hyaline and granular casts.

Case III.—Female; Mrs. M. W.; multipara; age 35. Complaining of repeated attacks of mild renal colic with intermittent hematuria. At times the urine was very bloody. Past history very suspicious of gonorrhea. X-ray negative. Cystoscope showed slight congestion of trigone with a prolapsed, blood-smeared right ureteral orifice. Remainder of bladder normal. Catheterization of ureters showed blood, with abundance of granular casts from right side, nothing in left specimen. Bacteriological examination negative. Operation disclosed a very large lobulated kidney with many adhesions, making delivery quite difficult. Nephrotomy showed several patches of scar tissue scattered throughout the parenchyma, but nothing else. The kidney was closed and during the convalescence the patient had a few attacks of mild pain due to the passage of clots. The urine cleared up before she left the hospital and there has since been no pain or hematuria.

Case IV.—Male; P. M. J.; age 54. Complaining of profuse intermittent hematuria with absence of pain Physical examination showed a pronounced anemia with great loss of weight and strength. Palpation of the kidneys and x-ray examination revealed nothing. The cystoscope showed a blood-stained bladder with the hemorrhage coming from the right ureter. Catheterized specimens showed blood, hyaline, granular and bloody casts from the right kidney, while the left specimen was negative. Bacteriological examination and tuberculin test were negative. Operation and bisection of the kidney showed nothing abnormal but congestion. Following the operation the urine became clear and has remained so to the present time.

The Ideal Treatment of Syphilis.*

By F. D. Austin, M.D., Clinical Professor of Rectal Diseases in the North Carolina Medical College, Charlotte, N. C.

It is not my purpose to condemn either mercury or salvarsan in the treatment of syphilis, but I am simply going to recite to you my experience, together with some of the leading men of the country in regard to the two treatments and the combined treatment.

Mercury, as you all well know, was the "sheet anchor" in the treatment of syphilis till the advent of Ehrlich's salvarsan a year or two ago. It was the general rule to treat a patient at least eighteen months to two years with mercury or the mixed treatment,

*Read before the Gaston County Medical Society, March 5th, 1913.

and as a rule the infection never appeared again. But at the same time there were occasional relapses, and still less occasional patients in whom mercury would not influence the severity of the infection in the least. These patients were classed under the general head of malignant syphilitics and they usually died in a few months after the initial lesion.

Mercury for centuries has been considered one of our specific medicines, and truly it has won its place by its deadly action on the spirochaeta pallida.

The value of mercury in the treatment of syphilis is abundantly proved by clinical experience. We know that symptoms disappear under its influence in a wonderful manner. The Wassermann reaction becomes negative under its powerful influence. The clinical aspect is confirmed by the laboratory findings. The spirochaetes disappear from the lesions under the local application of mercury as well as the internal.

Its defects are shown by an occasional recurrence of the symptoms. As a final cure, mercury is too often a disappointment. It fails because of faulty technic, or because the spirochaetes find a hiding place somewhere beyond the reach of the drug; that is in the nervous system, lymph glands, bone tissue, or because the spirochaetes differ in their sensitiveness to the action of the drug.

Salvarsan promised us a speedy cure in one dose. This promise, however, has not been fulfilled by any means, but we have in it a drug whose action toward removing the symptoms is truly marvelous. It often accomplishes in days results which are accomplished by mercury in weeks, but time has lapsed to show that the disease still retains its original characteristics after the 606 just as it does in mercury. Recurrences take place after the administration of salvarsan. The true nature of the disease is not altered in the least. Sufficient time has lapsed to prove that it is necessary to repeat the dose again and again in order that the spirillicide effects may be produced, and even then it fails in a certain percentage of cases.

Salvarsan has a number of deaths credited to its use, but of course they are few, and are getting fewer as we learn more about the technic of administration, dosage, etc.

Besides deaths from 606 we have also to deal with affections of the cranial nerves such as facial paralysis, ptosis of eyelids, deafness, and even blindness in some cases, but the blindness usually comes in those cases that have non-specific diseases of the optic apparatus. If the eye trouble is due to specific infection salvarsan will relieve it. I recall two cases of syphilitic iritis in both eyes that was cleared up in a very few days by 606 only to return again within a period of from three to four months. I also recall one case that had specific iritis after having four full doses of 606, and when put on mercury hypodermically cleared up within ten days.

I will quote some other men in this connection. Drs. Nichols and Hough, of Washington, D. C., in the January 11,1913, issue of the A. M. A., says: "That an attempt at a radical cure of syphilis in the secondary stage we must give a minimum of three to four doses intravenously of 606 combined with an intensive treatment with mercury at least two months."

Dr. Edward H. Shields in the Lancet-Clinic, December 7th, 1912, concludes: "That there is some doubt that if 606 will abort syphilis even in the primary stage. That the difference from a serological standpoint between salvarsan and mercury, that the odds are against salvarsan, and there is mortality following 606 which does not follow mercury, which should indicate the use of the former only when mercury fails, and that salvarsan should always be followed by mercury."

Dr. Howard Fox in the A. M. A., Oct. 5th, 1912, concludes: "That a serological comparison of mercury and salvarsan fails to show any decided advantage in favor of either remedy."

Osler, in his last edition of Practice of Medicine, says: "Always follow salvarsan with mercury."

Dieulafoy, the French author, recommends the two in conjunction.

Strumpell, the German author, recommends salvarsan in the early stages of syphilis, but there seems to be none, or very little benefit derived from it in tabes, general paralysis and metasyphilitic conditions.

Stage of Disease.	No. of Cases.	No. Positive.	No. Negative.	Per cent. Positive.
Primary	654	580	74	89.4.
Secondary	1,434	1,372	64	95.6.
Tertiary	485	404	61	86.8.
Latent	778	509	269	65.4.
Congenital	28	25	3	89.2.
Parasyphilitic	22	15	7	68.1.
Totals,	3,381	2,905	481	85.8.

He says nothing about the combined use of mercury and salvarsan.

If you will watch the different articles in the medical journals from week to week you will see the failures recorded to salvarsan and the recommending of the combined treatment.

The Value of the Wassermaun Reaction.

Craig of the U. S. Army Hospital at Washington, D. C., reports a series of 3,381 cases of syphilis consisting of the different stages as follows:

You will note from the above table that his highest per cent. of positive reactions were in the secondary, 95.6, and his lowest in the latent, 65.4, and an average of 85.8 for all.

My average positive reactions in about 1,500 reactions, done on all the above classes of patients, has been about 85 per cent.

Craig also reports in the February 22nd issue of the A. M. A. 4,784 cases that have been treated with salvarsan and mercury separately and combined. He concludes that a negative Wassermann is of no value as evidence of a cure until it has remained negative at least one year after any treatment. This shows the great possibility for one to err in his reports of cures by treatment.

He further states that alcohol will render a 100 per cent. positive reaction negative within 24 hours after taking same. Example: He took nine patients, each had a 100 per cent. positive Wasserman, and gave each one from 90 to 120 c.c. of whiskey. All of the Wassermanns became negative within 24 hours and remained so from 36 hours to three days.

This calls for a careful history as to taking alcohol any time within a week before having a patient's blood tested, lest you might get one full of alcohol and report him cured when in fact it is alcohol causing the temporary negative reaction.

I have noticed the inhibiting influence of alcohol in doing my blood work several times.

It is an unfortunate fact that at least 95 per cent. of the syphilitics are alcoholics and for this reason we must be very careful.

I always tell my patients not to take a drink for one week previous to having their blood examined.

My Personal Experience in the Treatment of Syphilis.

Personally, I have administered salvarsan more than 500 times, and I have yet to see the patient that I am absolutely sure that was cured with salvarsan alone. Too often I have had patients leave my office thinking they were cured, and for that matter I thought so too for awhile, only to return in from two to four months later saying: "Doctor, my mouth and throat is sore," or some undenyable symptom of syphilis, that could always be proven by the Wassermann reaction. I have a patient now that was given three large doses of salvarsan in January and February, 1912; his Wassermann remained negative till January, 1913, and now it is at least 90 per cent. positive. All this goes to prove to any man's mind that salvarsan is not a cure per se for syphilis. Where salvarsan will not remove the symptoms mercury will, and vice versa.

Within my own opinion and limited experience in the treatment of syphilis, I have arrived at the conclusion long ago, that the combined treatment is far better than either one alone. I make it an invariable rule to give 606 intravenously when I diagnose syphilis, and follow it immediately with mercury in some form, preferably hypodermically, for 30 days, then 606 again followed by mercury for 30 days, and lastly 606 followed by mercury again for 30 days, and wait six weeks and make the Wassermann reaction which I always find negative. Patients I treated this way 10 to 12 months ago still show negative reactions. Again, patients who had even two doses followed by mercury still show no symptoms either clinically or serologically.

There are a few men in this country who believe absolutely that if we give three or four doses of salvarsan in rapid succession, say ten or twelve days apart, that we will get a negative Wassermann never to become positive again. It will be only a few months till clinical evidence confirmed by serological findings will make these men admit they were in error (it will be very hard for some of them to take their medicine).

Some physicians advocate giving a dose every seven days for three to eight consecutive doses, saying that they always get an absolute cure. Truly, I suspect they will get a cure for the time being only, or a death. In my own experience I have tried that procedure only twice, and both of my patients died after the third dose with acute nephritis complicated with symptoms of acute arsenical poisoning. This was sufficient experience for me and I have never tried it again.

The evidence against the cure of syphilis per se by salvarsan, or the neo salvarsan (the new salvarsan) is too conclusive to be doubted by any sound thinking man. Ehrlich, himself, says to follow salvarsan with mercury to get the best results. The literature that comes in the packages with neo-salvarsan plainly says to follow it with

mercury in some form in order to get the best results.

Now, why should we even hope to get a radical cure for syphilis in salvarsan or neosalvarsan alone? The time perhaps will come when the drug will be so perfected that it will cure syphilis per se, but it certainly has not arrived yet.

It would be unfair to pass over this important subject without mentioning iodide of potash in connection with the treatment. I never give K. I. to any of my primary or secondary cases, but do give it to the tertiary patients after giving them the salvarsan and mercury as mentioned before in this paper.

We give K. I. as an alterative, or eliminative to rid the body tissues of gummatous conditions, etc., and not as a cure for syphilis. It will not kill spirochetes, and for this reason it is of no value in the primary or secondary conditions.

In conclusion, I wish to say that salvarsan will almost always relieve the grave, unsightly, malignant, or undesirable symptoms of syphilis and it should be used, but always, and please remember, always follow it with mercury.

A patient who has had the proper treatment and whose blood has remained negative for at least one year after any treatment should be regarded as cured, and a patient can be allowed to marry after that time, but not before.

One cannot be sure of a cure without a Wassermann blood test, and it should be done by some reliable man.

There is no excuse for the physician's over the entire country not having their patient's blood tested from time to time, as there is a few men in almost every State who are reliable blood men.

A dose of 606 every thirty days for three consecutive doses, with mercury between doses, and thirty days after the last dose, for primary and secondary, and an additional three months treatment of K. I. pushed to the limit in the tertiary conditions is the Ideal Treatment of Syphilis today.

The Inception and Growth of the Medical Profession in Union County.*

By Dr. John M. Blair, Monroe, N. C.

For nearly sixty years after the first settlers came to the territory that is now Union county, North Carolina, there was not a practicing physician within its borders. The territory was so sparsely settled or inhabited that the professional practitioner would have found it a poorly paid business. The nearest approach to the practice of the profession of medicine was the work of the "granny doctor," with which Union was abundantly supplied. At the birth of the seventh President of the United States in Union county no doctor was in evidence, but the historian tells us that there was hurrying to the homes of the nearest neighbors to call in the midwife. Next to the practice of the granny doctor was the care of the mothers for their families in nursing, poulticing, administering turpentine, whiskey and herbs. And among many the practice of the witch doctor was much sought after and faithfully believed in.

With the return of prosperity and the increase in the population after the war of 1812, the growth of churches and the old field pay school began in Union county, and soon the practice of medicine as a profession became a reality. Among some the practice of bleeding, and among others the practice of steaming, was the main treatment of all physical ills. From the earliest beginning, which was but little over a century ago, the profession of the medical doctor has developed rapidly, has had in its ranks many talented practitioners, has been of untold benefit in the relief of suffering humanity, and today Union county boasts the fact that she has a full supply of physicians the equal in both learning and ability of the best in the profession anywhere.

The first physician in Union county was Dr. William Smith, who came from the north of Ireland to the Old Waxhaw Settlement about the first of the last century. He was a scholar and a gentleman, had studied the science of medicine at the University of Dublin, had read of the land of the free and the home of the brave, and with a heart longing for adventure he crossed the wild Atlantic and cast his lot with our pioneer ancestors here in a community far removed from the lines of traffic and the marts of trade. And although he located in a pioneer community, it was one which at that time was furnishing many great men—the Pickenses, Calhouns, Millers, Browns and Jacksons—and was a sort of intellectual centre of the Carolinas. He entered upon the practice of his profession in Jackson township about 1810, and practiced with a marked degree of success all the remainder of his life.

The next among the early doctors in Union county was Dr. William Pyron, of Goose Creek township. He served through the war of 1812 and with what he had learned from the army surgeons and what he was able to acquire thereafter from a course of study at home, he entered upon the practice in 1820 among the people of his

*Read before the Union County Medical Society February 3, 1913.

native township and was counted through all the years of his life a very good physician.

The next person to enter the profession of medicine in Union county was Dr. John Threadgill, who began practicing medicine in Monroe township about the year 1822.

In 1830 Dr. Ellison Carraway, after having studied the course of medicine to completion under the learned Dr. William Smith, began the practice of the profession in Jackson township in the same community with his teacher and became a physician of considerable merit and great influence in the section in which he lived. Dr. Carraway, like many of the other doctors in Union county in the early days, taught school and preached to add to the income which the profession of medicine yielded in the early days.

In the year 1830 Dr. Josiah Cuthbertson began the practice of medicine in Monroe township. He believed in a liberal use of steam, and were he living to this day he would regard the Turkish bath as quite the thing. He was a man of fine sense, and, although he had received but little education himself, he was so firm an advocate of learning that he sent his son Hyram to Philadelphia and gave him a complete medical education.

The next among our early doctors was Dr. John McCall who began practicing medicine in Monroe township about the year 1833.

The next to enter the profession was Dr. Jas. J. Williams, who began practicing medicine in Jackson township in 1840. He was an educated man, was in many ways gifted, met with great success in his profession, and was so popular as to be one of Union county's earliest representatives in the legislature of North Carolina.

Next came Dr. Thos. Caldwell, who began practicing about 1840 in Goose Creek township. Then followed Dr. William Cook, who began practicing in Jackson township about 1842. In 1842 also came Dr. Jas. Smith to the profession in Monroe township. Dr. McKee Houston, a man of great learning in his day, began practicing medicine in Sandy Ridge township 1844. In the same year Dr. Henry M. Jennings began practicing in the same township. In 1845 Dr. Jas. F. Lee entered upon the practice of the profession of medicine in the township of Jackson. The next year Dr. Thos. W. Redwine and Dr. William McIlwaine both began practicing medicine in Sandy Ridge township. The history of each of these worthy members of the profession is too well known to need rehearsing. In the year 1848 Dr. Hyram Cuthbertson, son of Dr. Josiah Cuthbertson, came back to and began practicing medicine in the county of his nativity at Monroe.

After the discovery of the use of anesthetics in surgery in 1846 Dr. Hyram Cuthbertson and Dr. McKee Houston became interested in and performed many surgical operations in their practice in Union county. Dr. McKee Houston was a man of much learning, fine sense and individual initiative. Dr. Hyram Cuthbertson possessed the best medical training of his times. He was the son of a doctor of the old school, inherited a fondness for the work of administering to the ills of the sick and afflicted, and determined to prepare himself most suitably for the work. He rode on horseback from the old home over on Richardson Creek to Philadelphia about 1844, sold his horse and entered the medical college, roomed with a student from Quebec, Canada, took one course at Philadelphia, joined his room-mate and graduated at Toronto, Canada, and returned to Union county to enter upon the practice of his profession.

The names of the doctors in Union county, the respective times at which they engaged in the practice of medicine, and the townships in which they practiced are as follows:

Dr. J. S. Gribble, 1850, Monroe township; Dr. S. E. McLaughlin, 1851, Monroe township; Dr. Jas. W. Dorster, 1852, Monroe township; Dr. R. C. Patterson, 1853, Monroe township; Dr. John Timmons, 1854, Lanes Creek township; Dr. Elias C. Alexander, 1856, Monroe township; Dr. Benjamin Chears, 1857, Monroe township; Dr. J. T. Baskins, 1857, Lanes Creek township; Dr. Thos. Carrigan, 1857, Lanes Creek township; Dr. McCollum Smith, 1857, New Salem township; Dr. J. S. Blair, 1858, Lanes Creek township; Dr. W. H. Gribble, 1858, Buford township.

Dr. Gribble is still living and is the oldest physician in the county. Much of the historical data herein given must be credited to his fine memory and careful research.

Dr. J. L. Bost, 1859, New Salem township: Dr. Ellison Huntley, 1859; Marshville township; Dr. Jas. A. Horne, 1859, Lanes Creek township; Dr. T. L. Doster, 1858, Marshille township; Dr. T. W. Bickett, 1860, Monroe township; Dr. T. H. Means, 1861, Monroe township; Dr. E. A. Covington, 1867, Goose Creek township; Dr. J. Bruner, 1867, Goose Creek township; Dr. Thos. Parks, 1868, Lanes Creek township; Dr. Isaac H. Blair, 1871, Monroe township.

Dr. Isaac H. Blair had practiced in South Carolina before coming to Monroe, and had served as Army Surgeon in the Confederate Army during the Civil War. Dr. T. W. Bickett, above named, the father of the Attorney General of North Carolina, had also been a Surgeon in the Army, as had

many others of the physicians of this period.

Dr. John Woodcock, 1872, Marshville township; Dr. W. C. Ramsay, 1874, Monroe township; Dr. J. W. Sturdivant, 1875, Jackson township; Dr. W. H. Smith, 1877, Monroe township; Dr. R. W. Blair, 1878, Jackson township: Dr. W. H. Martin, 1878, Jackson township; Dr. T. A. Crowell, 1879, Monroe township; Dr. S. L. Montgomery, 1880, Monroe township; Dr. S. J. Welsh, 1860, Monroe township; Dr. Jas. Crowson, 1879, Buford township; Dr. Thos. Lackey, 1879, Buford township; Dr. F. M. Winchester, 1880, Monroe township; Dr. J. J. Rone, 1883, Sandy Ridge township; Dr. A. J. Austin, 1884, Goose Creek township; Dr. ——— Stewart, 1885, Monroe township; Dr. H. M. Brooks, 1879, New Salem township; Dr. R. Armfield, 1883, Marshville township; Dr. Geo. B. Nance, 1885, Monroe township; Dr. J. B. Eubanks, 1886, Lanes Creek township; Dr. J. E. Ashcraft, 1887, Monroe township; Dr. John M. Blair, 1887, Monroe township, Dr. W. E. Deese, 1895, Marshville township; Dr. Henry C. Houston, 1894, Jackson township; Dr. Jas. W. Price, 1889, Monroe township: Dr. Jas. H. Weatherspoon, 1889, Jackson township; Dr. W. A. Monroe, 1887, Jackson township; Dr. G. H. Burgess, 1888, Jackson township; Dr. J. E. Greene, 1885, Marshville township; Dr. H. B. Hoyle, 1890; Monroe township; Dr. C. P. O'Steen, 1891, Jackson township; Dr. W. K. Reid, 1892, Jackson township; Dr. Wm. McAlister, 1893, Jackson township; Dr. A. H. McLeod, 1895, Jackson township; Dr. N. G. Moore, 1895, Monroe township; Dr. J. V. Hunter, 1899, Jackson township; Dr. R. M. Potts, 1896, Sandy Ridge township; Dr. J. P. Munroe, 1901, Monroe township; Dr. R. M. Robinson, 1904, Jackson township; Dr. W. D. Pemberton, 1890, Monroe township; Dr. W. O. Nesbit, 1893, Jackson township; Dr. Harry G. Utley, 1898, Monroe township; Dr. W. H. Crowell, 1892, Sandy Ridge township; Dr. J. E. Kerr, 1895, Goose Creek township; Dr. H. D. Stewart, 1898, Sandy Ridge township; Dr. W. R. McCain, 1897, Jackson township; Dr. A. D. N. Whitley, 1897, Buford township; Dr. W. H. Smith, 1899, Goose Creek township; Dr. W. H. Price, 1885, Sandy Ridge township; Dr. M. P. Blair, 1893, New Salem township; Dr. W. W. Barrett, 1893, Monroe township; Dr. O. A. Lamb, 1892, Marshville township; Dr. J. W. Bailey, 1903, Sandy Ridge township, Dr. J. W. Neal, 1901, Monroe township; Dr. S. A. Stevens, 1900, Monroe township; Dr. A. M. D. Whitley, 1909, Buford township; Dr. H. W. McCain, 1910, Jackson township; Dr. J. Y. Fitzgerald, 1909, Vance township; Dr. S. H. Ezzell, 1908, Jackson township; Dr. L. E. Guin, 1907, Jackson township; Dr. D. R. Perkins, 1905, Marshville township; Dr. W. R. Griffin, 1911, Monroe township; Dr. H. E. Vaughn, 1911, Marshville township; Dr. R. L. Payne, 1911, Monroe township; Dr. J. R. Jerome, 1907, Monroe township; Dr. D. T. Boger, 1912, Goose Creek township; Dr. B. B. Sturdivant, 1912, Sandy Ridge township; Dr. H. C. Paddock, 1912, Sandy Ridge township; Dr. J. T. Ramsey, 1911, Monroe township; Dr. J. C. Brooks, 1910, Marshville township.

The colored physicians who have practiced in Union county are as follows:

Dr. J. S. Massey, 1895, Monroe township; Dr. Ed. Thomas, 1906, Monroe township; Dr. Thos. E. Craig, 1912, Jackson township; Dr. W. H. Croft, 1912, Monroe township.

Three of these are now engaged in the practice of medicine in Union county, Dr. Ed. Thomas having left the county.

Many bright and intelligent sons of Union county have studied medicine and entered upon the practice outside of or away from their native county,

The following is a list of Union county men who have located elsewhere for the practice of their profession:

Dr. Eli Crowell, Dr. Millard F. Huntley, Dr. A. J. Crowell, Dr. S. M. Crowell, Dr. John M. Belk, Dr. Matthew McCaulay, Dr. Brown Simpson, Dr. Will S. Simpson, Dr. Cicero Love, Dr. Vann Long, Dr. Dave H. Funderburk, Dr. E. C. Boyte, Dr. John Hart, Dr. F. D. Austin, Dr. Albert Levy, Dr. Ray Adams, Dr. Henry Walkup, and Dr. Hugh McManus. Of these all are living except Dr. Eli Crowell.

The medical profession bears the nearest resemblance to that of the ministry, for we read in the holy scriptures that Christ when on earth not only taught and preached, but went about healing the sick and doing good. The science of medicine, or rather the knowledge of the science of medicine, is constantly becoming better known and in the advancement that is being made in the science the physicians of Union county are as acutely interested and keep as thoroughly posted as the most learned and scientific medical men anywhere. The people of Union county take pride in, and have just cause to take pride in the medical men of their county—the men who administer to the ills of suffering humanity.

The Extirpation of the Lachrymal Sac in Chronic Dacryocystitis.*

By F. Phinizy Calhoun, A.B., M,D., Atlanta, Ga.

In considering the removal of the lachrymal sac in chronic dacryocystitis, as the

*Read before the Medical Association of Georgia, 1912, Augusta, Georgia.

title of the paper implies, a knowledge of the surrounding anatomy is necessary in order that one might appreciate any discussion on the subject. I therefore take the liberty of presenting a few elementary facts in the anatomy of the lachrymal apparatus.

The lachrymal apparatus consists of two parts, the secretory (the lachrymal glands) and the excretory (the lachrymal passages).

The glands, (one large and a small accessory gland) are situated in the bony fossa in the outer and upper angle of the orbit, and by the excretory ducts, they ampty their contents into the outer half of the superior fornix of the conjunctiva. These glands receive a nerve, and stimulus from the lachrymal branch of the opthalmic division of the trifacial nerve, which with the nasal branch of the same nerve and the ciliary ganglion supply the cornea, the conjunctiva and the execretory passage.

The excretory passage first begins with the lachrymal puncta, two small openings on the free border of the upper and lower lids near the inner canthus. The puncta lead into coverging canals, (canaliculi) which in turn empty into the lachrymal sac, situated in the inner angle of the eye, in a cleft which the lachrymal bone forms for its reception. The lachrymal bone bounds the sac nasally, while temporally and above it is closed by the internal palpebral ligament, a most important structure in determining the position of the sac.

Where the bony cleft of the lachrymal bone merges into the bony canal, the lachrymal sac passes into the lachrymal duct. Here we find the narrowest part of the lachrymal canal, and at this point pathological changes (stricutres) most frequently occur.

From this point, the duct passes downward, backward, outward and empties below the inferior turbinal bone into the nasal fossa. At this point, there is usually a large plexus of veins, another site for pathological changes.

The mucous membrane of the sac and the duct in continous, and these structures are distinguished by the fact that the sac lies against the bone only on one side and elsewhere it it free, whereas the duct is completely closed in a bony canal.

For these reasons any swelling or distention from fluid of these two parts could be recognized only in the sac. The duct cannot be distended on account of its bony walls, and it is a favorite site for constriction, whereas the sac does become distended and contrictions do not occur, except in cases of long standing.

The immediate cause for a chronic dacryocystitis is a stricture of the nasal duct and it usually develops from an affection of the nasal mucosa. This mucus membrane inflammation may begin with an acute coryza, or the rhinitis may become chronic as in the intumescent or hypertrophic form, or even progressing to the atrophic stage, an ozena may develop, and by continuity of structure, these changes involve the nasal opening of the lachrymal duct and finally the duct itself. In time, cicatrical changes take place in the duct or about its opening and a fibrous stricture forms, and the cause of dacryocystitis is even more obstinate.

When the stricture forms, and it may be an acute swelling or cicatrical changes, the tears can no longer drain into the nose, and as tears are always forming and are constantly forced by the act of winking into the sac, it becomes filled and ultimately distended. Mico-organism of all description (especially the pneumococcus) being washed into this sac by the cleansing process of the tears, find a good breeding ground in the decomposed material, and it is this decomposed fluid which irritates the mucus membrane of the sac, which inflames and throws off a pyoid secretion which mixes with stagnant tears. This new secretion closely resembles pus, and the eyeball is constantly bathed in this fluid.

Briefly mentioned, the foregoing is the anatomy of the lachrymal apparatus, and the etiology of lachrymal obstruction causing chronic dacryocystitis. Why then is such a condition serious and why does it demand surgical interference?

First, there is a constant overflow of tears, (epiphora) which is an annoyance. This symptom might be the only discomfort to the patient and is the only symptom in a catarrhal inflammation of the lachrymal duct. However, from this might develop the purulent form.

In the purulent form, the eye is constantly bathed in a fluid, fairly alive with bacteria, this induces a chronic inflammation of the lids and conjunctiva which in turn excites a greater activity of the lachrymal gland. Any injury to the cornea like a simple foreign body would almost certainly result in a violent ulcer, and in many cases the ulcer leads to the destruction of the eye. In long standing cases of chronic dacryocystitis, in which there is an atony of the walls of the sac, there forms from an over distension of the sac, a tumor often as large as a walnut which projects far forward or often deep into the orbit, which might cause an exophthalmus. This swelling is given the name of hydrops of the lachrymal sac.

In considering chronic dacryocystitis, three forms are recognized, First, the catarrhal type, in which there is only an epiphora. Second, the purulent type, having an epiphora and the formation of a

pyoid material. Third, the abscess type, or more properly an acute exacerbation of a chronic dacryocystitis. At present, I am not convinced that the extirpation of the sac is the conservative treatment for the first classification, hence this paper deals with the two latter types.

Ophthalmic surgeons are at such variance in the manner of treating chronic dacryocystitis of the second and third classification, that my views on the subject, while they might seem radical to some, I believe in the interest of the patient, they are really the most conservative.

The usual manner of treating a chronic dacryocystitis has been the slitting of the lower canaliculus with a knife, passing it into the sac, then through the stricture, and trying to keep the duct patulous by gradual dilitation with concial sounds. It is needless to say that the nasal cavity receives its proper care and treatment. The duration and success of the treatment with sounds, depending upon the nature of the stricture, usually requires many months. Such, or with certain modifications, is considered the conservative treatment of chronic dacryocystitis.

After an experience of some few years with this so called conservative method, I have almost entirely abandoned the procedure, except in some very, very few selected cases, and from the very beginning I now extirpate the sac.

The cases that I treated so-called conservatively, that is by the probe method, have with but few exceptions, required a sac operation for a permanent cure.

Basso, an Italian surgeon (annali di Ottalomolgia xxxiv, 3-4) removed the lachrymal sac in 41 cases and macroscopically the conditon of the sac was as follows: First, simple stenosis without true cicatrical obliteration in 22 per cent.; second, obliteration at the superior strait with patency below 8 per cent.; third, inferior obliterations with more or less involvement above 40 per cent.; fourth, total obliteration 30 per cent.

Microscopically, in the cases of the second and third classification which I mentioned, there was great deformity of the sac from distention and smallness of the canal. The canal was usually obliterated. The epithelial lining of the sac was destroyed or a hyperplasia existed, and the tunica propia was substituted by a granulation tissue, rich in blood vessels, which formed large polypoid prolongations and villosities. The degree of pathological changes depended very much on the duration and character of the infection, that is whether of the catarrhal, mucoid, or purulent (abscess formation) type.

These pathological findings by Basso shows how tedious, if not impossible, in some cases the process of probing must be to perfect a cure. After all, it is one's experience which teaches whether the sac should be removed.

The indications for the removal, as I see them, are as follows:

1. The unwillingness or the inability on the part of the patient to submit to a long course of the probe treatment; a timidity on the part of the patient that would likely render the probe treatment successful.

In all clinical cases of chronic dacryocystitis of the second and third classifications, where probing could only be continued for a very brief period; these cases are in the poorer laboring class, and good eyes are as essential as good hands. According to their occupation, they are often most liable to have trifling injuries to the eye and with an accompanying dacryocystitis, a serious infection of the cornea is a most probable complication. With the removal of the sac, such a liability would be lessened.

In addition there are certain occupations which increase the liability to eye injury, as brick masons, stone cutters, machinists and the like, and even if they had the desire to submit to probe treatment, I should advocate the removal of the sac.

2. Evidence of history of previous attacks of phlegmonous, or acute dacryocystitis.

3. The presence of any indications for any operation on the globe, and especially a cataract extraction.

4. An ulcer of the cornea caused from dacryocystitis, which resists all forms of treatment.

5. Finally after a reasonable length of time these cases which have had the probe treatment and a failure results, the sac should be removed.

The technique of operating in these cases is so well known to ophthalmic surgeons that I will only briefly mention them. That which I have adopted does not differ materially from any of the usual ways.

I usually perform my operation under a local anaesthetic, using subcutaneously and plunging the hypodermic needle into the sac, a few drops of an equal part of a 2 per cent. cocaine and 1-1000 adrenalin solution. The operation is almost without any great pain, and unless the angular artery (a branch of the facial) is severed, there is but little hemorrhage. An incision over the sac is made, and with a Muller retractor the skin is held apart. After a careful dissection the sac is removed from its bed, and then it is thoroughly examined to see if any part of its wall has been left. The cavity should be thoroughly cleansed of all mucus membrane, else the operation will be a

failure. The cavity is curetted as well as the duct, and I usually denude the bone by pushing the mucus membrane forward with a large probe, until it reaches the floor of the nose. The wound can be closed by three small silk sutures, a small iodoform pad placed over the wound, then a firm dressing of gauze and cotton applied to obliterate all dead space. It is usually dressed on the third day to make the patient feel more comfortable, and the sutures are removed on the fifth day. Within ten days the linea scar is only perceptible, and one month later it is hardly discoverable.

There are accidents and complications which might arise and embarrass an operator. An incision of the branch of the facial artery might cause a troublesome hemorrhage; by pressure or with an artery clamp it can be controlled. If the sac is greatly distended with fluid or pus, one might burrow into the orbital cavity and if the sac is ruptured, an orbital cellulitis might subsequently develop.

The use of paraffine or liquids to distend the sac and outline its walls, I think unnecessary, as it might cause complications.

Failure of primary union or a breaking down of the wound are unpleasant complications; they will greatly delay healing and usually leave a noticeable scar.

The operation in experienced hands, by one who understands the anatomy of the parts, is easily and quickly performed,often not requiring more than twelve minutes in simple cases.

The natural question which arises after the removal of the sac, is what becomes of the tears. That there is a marked diminution in the flow after an operation cannot be denied, although the exact way in which this phenomena takes place has not been definitely determined. Bearing in mind that the nerve supply of the gland, the passages and the irritated region (the conjunctiva and cornea) is from the same source, it is natural to suppose if we remove a source of constant irritation, that is an inflamed lachrymal sac, we rid the whole lachrymal system of the previously existing irritations.

My results consist of 25 operations on 24 individuals; both sacs were removed in one case. All but one were adults, and that case was a child, age seven years, who gave syphilitic manifestations. He had a purulent rhinitis and recurrent attacks of lachrymal abscesses. The operation was performed with difficulty, under an anaesthetic, and there was subsequently an infection of the wound, and it required several weeks to perfect a cure. A letter from the child's doctor a few weeks ago tells me that he has not had a recurrence of the trouble, but as a result of necrosis of the nasal septum (undoubted syphilis) there is a marked nasal deformity.

A general anaesthetic was administered in but four cases, one a child, two extremely nervous women, and one a very complicated case with a lachrymal fistula which would not close.

In no case where the operation was done under a local anaesthetic was the pain as great as if the probe operation had been performed. Any chronic conjunctivitis from the lachrymal discharge or excessive tearing, should show signs of improvement within two weeks.

The permanent results in this series are gathered from letters sent patients requesting them to answer the following questions. 16 replied, and are as follows:

1st. Has there been any subsequent inflammation? Yes, 1; No, 13; doubtful, 2.

2nd. Is the tearing as copious now as before the operation? Yes, 5; No, 11.

3rd. Has the operation benefited you? Yes, 16; No, 0.

Ninety per cent. is a conservative estimate in this series, that a complete cure has resulted. I believe the same percentage of failures would also have been conservative, had the probe treatment been instituted.

833 Candler Bldg.

Primary Cancer of the Vermiform Appendix.—Graham (Edinburgh Medical Journal) reported six cases of his own and has found 172 cases of primary cancer of the appendix previously reported in the literature. The main facts of interest in connection with his own cases are the following: All were obtained at operations, in four of the cases performed for symptoms of appendicitis. The presence of the tumor was suspected at operation in three cases; in the other cases it was found on longitudinal section of the organ. The age in all the cases was under thirty. The tumor was situated at or near the tip in four cases, in the middle third in two cases. The tumors had a characteristic yellowish color, and in all the cases the lumen was obliterated at the site of the growth. Signs of old peritonitis were found in every case at the site of the growth. Concretions were present in two cases and a whipworm in one. Microscopically the tumors are chiefly spheroidal-celled cancers; in three cases they represent a transition between spheroidal-cell and adeno-carcinoma. No enlarged gland or metastases were observed,

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CHARLOTTE, N. C.

It is absolutely essential for the success ful conclusion of the campaign agains tuberculosis that the general practitione should be able to determine the presence o tuberculosis of the lungs in its early stages. The general man is greatly at fault in this particular instance, and it is too often the older men in a community who are the most negligent or ignorant on this subject. It is all too common for the family doctor to ask the patient a few questions, and look at his tongue, feel his pulse, say "H'm, H'm," a time or two, prescribe a tonic, and dismiss the case, to afterward find the patient has become an advanced case of tuberculosis. It is a common fallacy to deny the existence of tuberculosis because of the absence of tubercle bacilli in the sputum. It is the rule for the majority of general men in this country to examine their patients without making them disrobe and bare the chest. Many a good general practitioner errs in this regard. It is a physical impossibility to obtain a satisfactory result in examining the chest if the examiner has to listen through an indefinite number of clothes. Even the interposition of a thin gauze undershirt will totally obliterate the finer sounds and render the examination futile in a vast number of cases.

In the diagnosis of early tuberculosis, it is not necessary that the patient have any symptoms commonly ascribed to the disease. Fever, increased pulse, cough, sputum, loss of weight, etc., are not present in the majority of early cases until the disease has made some little headway. They should not be depended upon in order to make a diagnosis. *Their presence means that the disease is passing out of the early and favorable stage.* A suspicious history, such as a disposition to colds should throw the burden of proof upon the patient, and the case treated as tuberculous unless it can be definitely proved to the contrary.

A careful physical examination should be made in every case of suspicion and *should be repeated* at intervals of not more than two months. Every general man should endeavor to perfect his technique of examination of the chest to such a degree that he will be able to differentiate between the normal sounds of the healthy chest and the slight modifications which are indicative of early changes in the parenchyma of the pulmonary tissue.

It is a hard and ungracious thing to say, but it is pretty well demonstrated that the general man is, as a rule, ignorant of the physical findings in early tuberculosis. In a good many cases the failure to detect the disease early is due no doubt to carelessness rather than ignorance, but there can be no doubt that as a profession we are sorely afflicted with ignorance. It is not the rule for men who are writing and speaking in the campaign against this disease to so broadly accuse their co-workers of incompetence, but we do so here because it has lately been borne to us that there is a considerable number of our professional brethren who are laboring under the impression that they are well informed on this subject, while they are daily demonstrating their inefficiency to the eyes of their more advanced associates.

Might it not be a wise plan for us all to give a little special attention to this subject, discarding all our preconceived ideas and starting afresh. To some of us such a course will be a startling demonstration that "the world do move."

MEDICAL FEES.

While rarely is the matter of our professional compensation ever made the subject of notice or comment in our societies or in the columns of our medical journals, the recent stream of caustic comment on a well known Washington surgeon in sending a bill of $1,000.00 for a successful appendectomy on the person of a prominent Carolina member of the U. S. Senate would seem to make this a proper occasion for comment from the professional viewpoint of the proposition. In the case in point it is fair to assume the distinguished publicist desired and secured the best professional talent commandable, and it is equally pertinent to our viewpoint that the fee charged was not an unreasonable one or out of proportion to the fee in a capital case which the patient would without a shadow of doubt have charged one of his clients for his defense in a court of law. Unfortunately (?) for the medical profession, there is so much of the real work of both surgeon and physician done for sweet charity's sake, that when a proper patient is asked to pay a suitable fee, many people, recalling how much work their family physician has done for very little or no compensation, are apt to undervalue professional service and view askant a bill of proper proportions. Again it is to be remembered that while lawyers have for generations past been saving estates and winning suits involving immense sums of money, it is only within a comparatively

recent date that surgeons have daily been performing operations, not only saving the lives of persons but adding immensely to the length of life of the various citizens saved to the State by operative procedure, hence the public have not as yet become fully conversant with the actual value of a life-saving surgical operation and thus may not appreciate its full value to the individual as well as to society. When it is realized how very much more training and preparation the surgeon requires than the attorney, and the fact is recalled that very few medical men ever accumulate the goods of this world beyond the necessities of life with modest savings for the infirmities of age, it may be brought home to the consciousness of the laity that doctors and surgeons are not nearly so well paid as are attorneys, and have even yet to attain to their proper degree of the public's appreciation as professional men practicing a most difficult art and a most teasingly technical science.

In this connection it is well to stress the point we have previously made in these columns, that while medicine as a vocation is the most supremely charitable of all the professions of life, yet as a business proposition every man who enlists under the banner of Aesculapius, properly fits himself for the service, honestly and earnestly renders the very best within him to his clientele, should cheerfully meet the proper demands of charity or courtesy, and then, recalling the financial obligations he must meet, charge for and collect from all of his patrons able to pay at regular stated intervals, just like any other business man of the community, fees for professional services commensurate with the value of the service rendered, having appropriately due regard for ability to pay. We have known hundeds of worthy, able medical men battling with disease and death, often at the eventual expense of their own lives, and carrying gladly all the burdens society has willingly laid on a generous profession, passing through the pearly gates of the great beyond with very limited or no provision for loved ones left behind, but we have never yet known a physician or surgeon to receive more compensation than in our judgment he should have been entitled to.

We congratulate our distinguished junior Senator on his satisfactory recovery, for North Carolina could illy afford to lose his most valuable service at this time in the Nation's councils, and we felicitate the Washington surgeon on his having had the pleasure of successfully operating on an appreciative patient, able and willing to properly compensate his surgeon.

THE TURBINATED BODIES IN THE HEN.

The opening to the nasal cavities is small in the hen and is partly covered by a strong fibrous piece of membrane for a short distance at the back part which is continuous with the surrounding tissue. The measurement of the opening is about one quarter of an inch or less.

The inferior turbinated body extends well down to the opening, the front part of it almost projecting into it, while on the inside it is closely attached to the strong fibrous membrane covering it, which might seem to be almost for this purpose.

The inferior body is small, triangular in shape, with the apex in front and the base directed backwards, being about one quarter of an inch long. It is folded on itself and situated in a cavity of its own, and also separated from the middle body by a fibrous septum.

The middle turbinated body is long, narrow and irregular, running obliquely down and back to be attached to a fold of membrane at the front part of the eyeball. It lies in a loose sac and is separated from the superior by a fold of membrane. In front it is attached to the septum or base of the inferior body. It is the largest of the three bodies, being slightly higher than the inferior body but below the superior. The superior turbinated body is a small, thin fold, curved on itself, lying at the upper and inner angle of the eye, being attached to a fold at the upper and inner angle of the orbit. All of the turbinated bodies in the hen are smaller than those in the turkey, and also of those in the goose, while they are arranged differently to those in the nose of man, being of a different shape and closer together.

The turbinated bodies are thus developed in the hen, turkey and goose, as well as in other fowls, also in water fowls and birds of the air, thus serving some important function the same as those in man.

THE TREATMENT OF CHOREA.

Arsenic in the ascending doses is the old treatment for chorea, and has been considered the best treatment in days gone by and still has its advocates at the present time. It is begun in small doses and gradually increased until full physiological effect, as far as can be tolerated. Some patients will bear considerably more than others. Occasionally arsenic will produce what is known as arsenical neuritis, renal irritation, and disturbances of the gastro-intestinal tract. The arsenic treatment has been attacked on the ground that it is not particularly efficacious, and liable to do harm. Hemorrhage from the stomach, and renal hemorrhage has been reported from its use. Cabot seems

to doubt the usefulness of arsenic in the treatment of chorea.

Some authorities think that chorea is a rheumatic manifestation, or very closely allied to it, and from this standpoint consider large doses of sodium salicylate our best remedy in it. It is stated by good authority that large doses of sodium salicylate have given good results in the treatment of chorea. Acetyl salicylic acid has been relied on as a substitute for arsenic in chorea. One writer thinks that all treatment in the way of drugs is futile unless rest is insisted upon. I am personally acquainted with a physician that is a close observer in practice, and has over thirty years experience in practice, that uses equal parts of the fluid extract of gelsemium and cinicifuga (black cahosh) in doses of 6, 10, 15, and up to 30 drops every four to six hours in the treatment of chorea. He says he has the first case of chorea to see that this treatment did not cure in ten days to three weeks.

It is a well known fact that gelsemium and cinicifuga are nervines and antispasmodics, and have a favorable influence in many nervous disorders. Cinicifuga has been used with good results in some cases of rheumatism, and would no doubt be of some use in cases of chorea of a rheumatic manifestation.

Chorea is a functional nervous disorder, usually occurring in youth. It may be caused by a number of conditions, as fright and reflex irritation, etc. It is said to affect girls about three times as frequent as boys. Chorea sometimes becomes a serious complication of pregnancy, resulting in the death of both fetus and mother.

Syphilis has more influence in causing tuberculosis than many suppose, as well as various other diseases.

I mention this matter and physicians can take it at what they think it is worth.

IS THE PHYSICIAN'S RIGHTS BEING TAKEN?

The druggists are trying for laws to prevent physicians from doing their own dispensing which, if ever passed will be a great injury to the physician in many ways. It will be one of his rights taken away, and will open up the way for others to be taken.

The dentist is working after all the teeth extracting and diseases of the mouth and jaws, including medical and surgical cases.

The chiropodists are getting laws to regulate the practice of chiropody, and will soon have all diseases of the feet, including medical and surgical cases, under their care.

The optician is getting laws regulating that practice in many States, and will soon have all the eye practice.

In spite of enlightenment and progress the midwife is still recognized and licensed in many States, and in some requires no license at all; that is, midwifery is free to any woman that wishes to take up the practice.

The chiropractors and osteopaths are monopolizing massage under another name, and will soon have all that line of practice regulated to their care.

The "mental healers" are allowed to go free and practice in most States, and they are doing most all the psychotherapy practice.

The hospital doctors are now asking for laws to prevent any one from doing major surgery except those that have a special license for this.

So the physician will have the surgical department of his license revoked for the benefit of the hospital surgeons.

Now when the physician is no longer allowed to dispense his own remedies, nor allowed to extract teeth or do any surgery on the mouth and jaws, and the chiropodist legislates his work on the feet out of existence, the optician takes charge of the eyes the midwives take the obstetric practice. The chiropractors and osteopaths prevent the physician from doing massage, the mental healer takes charge of suggestive therapeutics, and the hospital doctors take charge of all major surgery, we want to know what will be left for the physician to do.

There are many other things that could be mentioned, such as special taxation on physicians in many places. The medical profession is to blame for much of this by asking for such laws as special license to practice major surgery and other specialties.

There is no telling when the matter will ned.

THE TREATMENT OF EPILEPSY.

Potassium bromide is the drug that is usually given in the treatment of epilepsy. In large doses it will prevent the attacks but very rarely ever does any more. The injurious effects of large doses of potassium bromide, when long continued, is very well known to the profession, and its use alone is not approved of. Some report good results with sodium bromide in the treatment of epilepsy, and think it has less injurious effects than potassium bromide. Whether this is true or not we are not prepared to say.

The following prescription is recommended:

℞	Sodium bromide	3x
	Fld. ext. solanum	3ii
	Aqua. camph. q. s. ad.	3iv

Sig.: Teaspoonful t. i. d. in water.

Solanum carolines is highly recommend-

ed by some physicians in the treatment of epilepsy. It has been given hypodermically and a cure made after its internal use by mouth had failed Solanum carolines deserves a thorough test in epilepsy, and its value or worthlessness known. The hypodermic idea should not be lost sight of, as the hypodermic route is the most perfect way a remedy can be used. Strontium bromide was used for twenty years by Dr. M. R. Calendar in the treatment of epilepsy with good results. He was convinced of the value of the drug and of its superior efficacy, compared with the alkali bromides. As much as one drachm, or even more, has been given three times daily with a very large measure of success.

The treatment is given for ten or twelve months, and in a few even longer. A number of cases of severe epilepsy thus treated have been free from subsequent attacks for some years and may be now considered cured.

The use of strontium bromide in sufficient doses is strongly advocated. In giving strontium bromide remember the doses should be large. In my opinion good results could be obtained in many cases of epilepsy by the internal use of strontium bromide in large doses and by the hypodermic use of solanum and general faradization two or three times a week.

The diet, of course, should be regulated, and the rectum should be dilated if needed, pockets or hemorrhoids or other rectal diseases removed. If preputial adhesions exist in either male or female they should be broken up.

Editorial News Items.

The following is a list of the medical appointments made by Gov. Locke Craig of North Carolina:

GOLDSBORO HOSPITAL.

Directors for the State Hospital at Goldsboro for the term of six years, ending March 12, 1919:

W. L. Hill, of Duplin county.
J. C. Cromartie, of Bladen county.
J. W. Thompson, of Wayne county.

BOARD OF HEALTH.

Members of the State Board of Health for the term of six years ending March 7, 1919,

Dr. Richard H. Lewis, of Wake county.
Dr. Edward Jenner Wood, of New Hanover county.

TUBERCULOSIS HOSPITAL,

Directors of the State Sanitorium for the Treatment of Tuberculosis for the term of eight years, ending April 1, 1921:

Dr. R. H. Lewis, of Wake county.
J. R. Blair, of Montgomery county.
Henry A. Page, of Moore county.

And J. R. Gordon, of Guilford county, to fill out the unexpired term ending April 1, 1919.

STATE HOSPITAL AT MORGANTON.

Directors of the State Hospital at Morganton for the term of six years, ending April 1, 1919:

J. P. Sawyer, of Buncombe county.
A. A. Shuford, of Catawba county.
A. E. Tate, of Guilford county.

DEAF AND DUMB.

Directors of the North Carolina School for the Deaf and Dumb at Morganton, for the term of six years, ending March 12, 1919:

J. L. Scott, Jr., of Alamance county.
W. R. Whitson, of Buncombe county.
W. W. Neal, of McDowell county.

STATE HOSPITAL AT RALEIGH.

Directors of the State Hospital at Raleigh, for the term of six years, ending March 12, 1919:

W. A. Erwin, of Durham county.
Jos. G. Brown, of Wake county.
E. F. Aydlett, of Pasquotank county.
A. B. Croom, Jr., of Pender county.

SCHOOL FOR FEEBLE-MINDED.

Directors of the School for the Feeble-Minded, at Kinston, for the term of six years, expiring March 14, 1919:

Dr. L. B. McBrayer, of Buncombe county.

And R. E. Austin, of Stanly county, to fill the place that he occupied prior to his resignation in November, 1912.

Board of Medical Examiners of the State of North Carolina.

The meeting of the Medical Society of the State of North Carolina for the year 1913 was originally fixed at June 17th, and that of the Board of Medical Examiners at June 10th. A change in the date of these meetings was made, but it was found impracticable for many of the applicants to meet the change, and it has now been decided to hold these meetings on the date originally appointed.

W. W. McKenzie, M.D., President, Salisbury, N. C.

Benj. K. Hays, M.D., Sect'y-Treas., Oxford, N. C.

J. C. Rodman, M.D., Washington, Surgery.

L. B. McBrayer, M.D., Asheville, Gynecology and Obstetrics.

W. W. McKenzie, M.D., Salisbury, Anatomy and Pathology.

H. H. Dodson, M.D., Greensboro, Practice of Medicine.

John Bynum, M D., Winston-Salem, Materia Medica and Therapeutics.

J. L. Nicholson, M.D., Richlands, Chemistry and Diseases of Children.

Benj. K. Hays, M.D., Oxford.

The next annual meeting will be held at Morehead City June 10, 1913.

REQUIREMENTS FOR ENTRANCE TO EXAMINATION FOR MEDICAL LICENSE.

An applicant for license to practice medicine in North Carolina must appear before the Board of Medical Examiners in regular session and present a certificate of good moral character attested by two persons known to the Board, a diploma from a medical college in good standing or a license from some other State, and must deposit fifteen dollars with Secretary of the Board. He will then be examined upon the following branches of medicine: Anatomy, Physiology, Surgery, Pathology, Medical Hygiene, Chemistry, Pharmacy, Materia Medica, Therapeutics, Obstetrics, Diseases of Children and the Practice of Medicine. The examinations are written, oral and practical combined.

He must make an average of eighty per cent. upon all the branches, and he must not fall below thirty-five per cent. upon any one branch.

TEMPORARY LICENSE.

An applicant for temporary license must appear before two members of the Board of Medical Examiners and present a certificate of good moral character, a diploma from a medical college in good standing, and must pay a fee of five dollars. He must then stand a satisfactory oral examination.

A temporary license continues in force only until the next regular meeting of the Board, and is never granted but once to the same applicant.

Applicants for temporary license may call upon any two members of the Board at their homes at any time in the year, selecting the two most easily accessible.

REQUIREMENTS FOR RECIPROCITY.

1. Reciprocity is granted only to men of known reputation and ability. Unless the applicant has had five years experience in successful practice in the State in which he then resides, or two years of successful hospital experience, or has filled positions of medical trust accounted by the Board as the equal of these, and unless he is a graduate of a high class medical college and possesses a good preliminary education, his application will not be considered. The burden of proof is upon the applicant to show what his attainments are.

2. He must not have failed before the North Carolina Board.

3. He must present himself in person before the North Carolina Board at its regular session. To this rule no exception is ever made. He must then pay a fee of fifty dollars.

4. He must fill out a blank application in regard to his moral character, educational attainments, identity, etc., and file the same with the Secretary at least thirty days before the meeting of the Board. (Blank applications may be obtained from the Secretary upon request.

5. Reciprocity will be granted to physicians who have been admitted by examination to the United States Public Heatth and Marine-Hospital Service, the United States Navy or Army, and have been continuously in service, or have received honorable discharge, and have been in continuous successful practice to the date of application.

In regard to the matter of reciprocity, the State of North Carolina regards the qualifications of the applicant rather than the State from which he comes. In every case it is necessary that the applicant appear in person before the Board of Medical Examiners in regular session, and by this personal interview convince the members of the Board that he is a man of intelligence, sobriety, and high personal character. For this reason it is impossible to make a definite promise sf reciprocity to any man until he has appeared before the Board.

The applicant must also produce papers showing that he has a good preliminary education, is a graduate of a high-grade medical college, and that he has been successful in his medical undertakings since graduation. In addition to the application blank, the applicant must furnish abundant evidence that every statement contained thereon is true. That is, when hospital experience is claimed, it must be accompanied by letters from the proper authorities, showing the time of such service, and certifying that this service was satisfactory. The same requirements are made in regard to other positions of medical trust.

Reciprocal relations have been established with Louisiana, Indiana and Minnesota on a basis of preliminary education and college rating

With Virginia and Texas on a basis of two years' hospital work or five years of successful practice.

The North Carolina Board reserves to itself the privilege of rejecting any applicant for reciprocity without question or comment on the part of the applicant.

BOOK NOTICES.

Keen's Surgery. Volume VI. The Volume with the newest Surgery. By 81 eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S. (Eng. and Edin.), Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Octavo of 1177 pages, with 519 illustrations, 22 in colors. Philadelphia and London: W. B. Saunders Company, 1913. Entire work, consisting of six volumes, per volume: Cloth, $7.00 net; Half Morocco, $8.00 net.

The five volumes originally contemplated in this System of Surgery were published between 1906 and 1909. This volume has been thoroughly revised and enlarged, with all of the obsolete matter left out. As the volume now is, it is the newest and most complete work in surgery. Many of the leading surgeons of the world have contributed to this volume. Ever since the last manuscript was put in type valuable matter has appeared, but too late to be included in the text.

The researches of Wassermann and others on mouse cancer, has been merely mentioned in this work. A few new chapters or sections have been introduced, *e.g.*, an important chapter on Anoci-association, a fuller description of apparatus for operating on the thorax and its contents under positive and negative pressure; the method of anesthesia of Meltzer and Auer by intratracheal insufflation; the newer methods of anesthesia by nitrous oxid and by the intravenous introduction of ether; the surgery of the hypophysis; the treatment of cancer by fulguration, desiccation, etc.; the rapidly extending use of iodin as a disinfectant of wounds and of the field of operation; the use of salvarsan in syphilis, etc. The department in which the greatest progress has been made within the last five years has been Thoracic Surgery. This has been fully discussed.

The general index of the whole six volumes will prove very useful.

We are glad to have the privilege of recommending this volume to the profession.

The illustrations and binding are of a very high type.

Tuberculin in Diagnosis and Treatment. By Francis Marion Pottenger, A.M., M.D., LL.D., Medical Director of the Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California. 243 pages, royal octavo, 35 illustrations, including one colored plate. Price, $3.00.

This volume is the most complete and up-to-date work on tuberculin that has yet appeared. Beginning with the importance of tuberculin tests in the early diagnosis of tuberculosis, the author discusses in detail "Subcutaneous Tuberculin Test," "Cutaneous Tuberculin Test," "Tuberculin in Treatment of Tuberculosis," "Hypersensitiveness," "Certain Conditions which have made the Adoption of Tuberculin as a Diagnostic and Therapeutic Measure Difficult," Evidences of the Therapeutic Value of Tuberculin," "Fever in the Relationship to Tuberculosis," "Temperature Curve in Tuberculosis," "Technic of Administering Tuberculin," and an Appendix, in which is given for the first time in English Koch's announcement of the discovery of tuberculin.

Dr. Pottenger is qualified to speak on this subject, Two thousand cases of tuberculosis coming under his personal care in sanatorium practice furnishes the basis for this work. Careful, painstaking effort, is everywhere noticeable in this production. The chapters on Importance of the Tuberculin Test in the Early Diagnosis of Tuberculin is especially to be commended, as well as that on Technique of Administering Tuberculin.

There is no doubt but that many failures attending the use of tuberculin in the past have been due to a lack of knowledge of its proper administration. This defect can be overcome by a careful perusal of this volume and to follow its technique.

Progresssve Medicine. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College, Philadelphia, assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia, March, 1913. Owners and Publishers, Philadelphia and New York: Lea & Febriger. Six dollars per annum.

The contents of this volume are as follows: Surgery of the Head, Neck and Thorax; Infectious Diseases, Including Acute Rheumatism, Croupous Pneumonia, and Influenza; Diseases of Children; Rhinology and Laryngology; Otology.

The reading matter contained in this volume is up-to-date in every sense of the word. giving all the latest discoveries and methods of treatment.

Progressive Medicine. A Quarterly Digest of Advances. Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical

College, Philadelphia, assisted by Leighton F. Appleman, M.D., Instructor in Therapeutics, Jefferson Medical College, Philadelphia. December 1, 1912. Owners and Publishers, Lea & Febiger, New York and Philadelphia. Six dollars per annum.

Contents of Volume V: Diseases of the Digestive Tract and Allied Organs, The Liver, Pancreas, and Peritoneum; Diseases of the Kidneys; Genito-Urinary Diseases; Surgery of the Extremities, Shock, Anesthesia, Infectious Fractures and Dislocations and Tumors; Practical Therapeutic Referendum.

Many of the articles contained in this volume are thoroughly illustrated, and the work is so indexed as to make it very convenient for the reader.

Golden Rules of Gynecology. Aphorisms. Observations, and Precepts on the Proper Diagnosis and Treatment of Diseases of Women. By George B. Worberg, M.D., Kansas City, Mo., Professor of Diseases of Women and Clinical Gynecology, University Medical College; Gynecologist Kansas City General Hospital; Fellow and Ex-president Kansas City Academy of Medicine. St. Louis: C. V. Mosby Company. 1913.

The purpose of this volume is to give its readers those methods of gynecologic diagnosis and treatment, the observance of which is known to produce the best results.

This volume, while small, is very concise and to the point. It gives in a small space what the average book on this subject would devote pages to. No attempt has been made in this work to go into detail concerning certain matters pertatning to surgery in gynecology. It has been the author's endeavor to make short, emphatic, and convincing statements that may prove to be of practical value.

The literature on gynecology has been thoroughly searched, and what has seemed to be the best methods of procedure have been incorporated in this little book. The volume is neatly bound and is quite attractive in appearance.

The Daughter of Brahma. By I. A. R. Wylie, author of The Native Born, Dividing Waters, The German, etc. Indianapolis: The Bobbs-Merrill Company, Publishers.

This is a novel of unusual interest. Its wierd or strange setting makes it interesting from the very first pages. It is divided into two parts, I and II. The story is one of the most thrilling love affairs ever written.

The volume is well bound, and is quite attractive.

A Compend of Histology. By Henry Erdman Radasch, M.Sc., M.D., Assistant Professor of Histology in the Jefferson Medical College. Third Edition. Revised and Enlarged, with 111 Illustrations. The price of this book is $1.25 net. Philadelphia: P. Blakiston's Son & Company, 1012 Walnut Street, 1912.

The necessity for a new edition of this work has given the author an opportunity, not only to make a thorough revision, but to rearrange certain portions of the text and to present others according to the more recent conceptions. The most important changes are in Development of the Placenta, which has been entirely rewritten and reillustrated to meet the latest findings in the development of the embryo. The section on Bone Development has been amplified and the Connective Tissues in general added to. The description of the Ovum has been given in detail and the text on Menstruation increased. The parts of the Nerve System have been rearranged in order to follow them more in sequence.

This entire volume has been greatly enlarged. It is a work which will be of great value to medical students and also to the practitioner.

We take great pleasure in recommending it to the profession.

Abstracts of the Leading articles of the month.

On the Results of Treating Exophthalmic Goiter with X-Rays.—Stoney (British Medical Journal) speaks very favorably of the results of x ray treatment of Basedow's disease. She reports the results in 41 cases. Of these, 14 are completely cured; 22 have derived great benefit; only one case did not get well. The improvement is noted in both the subjective and objective phenomena. Stoney gives a small dose (less than enough to turn the Sabourand pastille), about seven to ten minutes, according to the tube. The anode is six inches from the skin. The amount of current used is one-half to one milliampere. In acute cases, treatments are given twice a week for a month. After a fortnight's rest the treatments are resumed. For chronic cases, once a week is sufficient.

Observations on Saline Solution in Epidemic Diarrhoea.—Mackenzie (British Journal of Children's Diseases) finds that the collapse in epidemic diarrhœa is due to low blood pressure and accumulated toxins. The results obtained from injecting fluid are increased blood pressure and the passage of those toxins. In saline solution we

have a highly satisfactory substitute for isotonic plasma, which is too expensive for use among the poorer classes. Subcutaneous injections of saline solution should be resorted to on the earliest indications of collapse, and in the case of very young infants at the first visit, whether collapsed or not.

Medical Treatment of Gastric Ulcer.—Dawson (British Medical Journal) says that of all drugs he prefers bismuth subnitrate in the treatment of gastric ulcer. In some cases, at the commencement, it has been demonstrated by the X-rays that in the presence of an ulcer some of the bismuth adheres to the raw surface. Aaron in his book, says "The subnitrate disintegrates slightly and liberates some of its nascent nitric acid, which acts locally as a stimulant, astringent, and antiseptic. The nascent nitric acid coagulates the albuminous surface of the ulcer, and thus acts as a protection to the healing."

He thinks that to get this result bismuth subnitrate must not be administered with an alkali, for the alkali would destroy the small quantity of nascent acid developed.

Dr. Riegel has also found bismuth subnitrate valuable in the cure of gastric ulcer. The administration of large quantities of bismuth by means of the stomach tube, after washing the stomach out, is suggested by Fleiner. The stomach tube is certainly unnecessary, as one can give large doses by the mouth first thing in the morning.

The bismuth subnitrate can be taken, as a rule, in powder or cachet form. While the patient is absolutely on milk, 5 grains may be sufficient before each tumbler of milk, and should be continued after all discomfort in the gastric region has disappeared. Later on it may be advisable to give it suspended with a little tragacanth, to which some chloroform water has been added, in the hope that the chloroform will tend still further to diminish any fermentation.

If an alkali is required to diminish the acidity, magnesium oxide is preferable to sodium bicarbonate. Boas has shown what enormous doses of sodium bicarbonate are required. If more than 25 per cent. of hydrochloric acid is present, no less than 2½ drachms of sodium bicarbonate is required to neutralize it. Another great disadvantage of the sodium bicarbonate is that it forms sodium chloride, and this in its turn tends to increase the formation of hydrochloric acid. Magnesium oxide will neutralize nearly four times as much hydrochloric acid. As a rule, however, it will be found that the lime-water added to the milk is sufficient in the treatment of gastric ulcer.

Constipation has to be carefully guarded against. Hence the treatment by means of olive oil, as recommended by Dr. Walko, may be of service. Dr. Dawson has had no experience with large doses, although 20 to 40 grammes of olive oil with sodium bicarbonate, when well tolerated, can often be employed with great advantage. This is best done by means of the stomach tube the first thing in the morning after washing out the stomach.

The administration of a small dose of castor oil daily is often of great service, and the castor oil seems to have the double advantage of keeping the bowels acting regularly, and at the same time helping the healing of the ulcer.

The daily use of a small dose of Carlsbad salts is valuable in the later treatment of gastric ulcer. When the patient has got so well that he can be given ordinary light diet, it is often found that he will improve more rapidly when he takes one teaspoonful of Carlsbad Sprudel salt in half a pint of warm water the first thing in the morning. In some cases double doses may be required. This second dose should be taken in half a pint of hot water with an interval of at least twenty minutes between the drinking of the two glasses, and there should be at least an hour's interval before breakfast is taken.

In cases in which the patient is anemic, the administration of iron in the form of hemoglobin may improve the general nutrition. In cases of marked anemia the subcutaneous injection of iron and arsenic is preferable.

In the case of pain, when the hot fomentations and bismuth have not been sufficient to relieve the patient, he prefers to give codeine or morphine.

In the treatment of hematemesis, the complete rest and the ice-bag to the stomach seems to be sufficient, and in order to get the complete rest it may be necessary to give codeine, and for the first two to five days rectal feeding should be avoided. Sterile normal saline solution may be injected directly into a vein in cases of urgent collapse, but good results may often be obtained by simple subcutaneous injection.

In cases of hemorrhage, Dr. Habershon recommends adrenalin chloride (1 to 1000) in one-drachm doses every two or four hours. Dawson himself has used the hypodermic injection of ergot with apparently good results.

Gastrojejunostomy.—O'Conor, in The London Lancet, calls attention to the danger of hemorrhage in the use of clamps. He describes his technique as follows: The skin is prepared by iodine, two coats twenty-four hours apart, without washing. After

having split the mesocolon a four-inch site is focused, at least one inch above the visible gastroepiploic vessels. The transverse fold of the stomach is held by an assistant whilst the proximal portion of the jejunum is brought to the surface. A stay suture is passed through the free border of the jejunum as near as possible to its fixed portion, and then passed through the corresponding end of the stomach fold which the assistant holds in readiness. Three more stays are similarly inserted about 1¼ inches apart. Thus a four-inch line for the primary (posterior) continuous Lembert is prepared. The latter is immediately inserted, and as it reaches each stay is tied to it, and continued to the next. Forceps having been previously applied to the ends of the stays, the assistant makes gentle traction, and provides the operator with a fixed well-defined area in which to make the gastric and jejunal incisions. These completed, the two central stays are cut short, all spurting vessels are seized with forceps and ligated, and then a continuous circular catgut suture is rapidly inserted, uniting the corresponding surfaces of the stomach and gut. The assistant again makes traction on the two stays at each end of the wound, and two more stays are inserted in the center. Thus, again, the site for the anterior continuous silk Lembert is well delineated, and sutures are applied as before. Cleek-Childe's ligature forceps is now passed through the edges of the slit in the mesocolon, and one end of each stay is drawn through; these when respectively tied close the mesocolic opening and draw down the mesocolon to the level of the suture line.

This method makes the operator master of the situation from beginning to end. The stays act as a fixed and sure guide for continuous sutures; they fortify the suture itself, in that the latter is tied to each as it passes. They act as excellent harmless tractors, admit of no flopping about or slipping away of parts, and obviate the necessity for needle mesenteric hematomata, an irritating set-back to an otherwise good 15 minutes' work.

The Value of Gastroenterostomy.—Kocher (Deutsche Zeitschrift fur Chirurgie) concludes that in so far as the immediate results of the operation are concerned they may be said to be without danger, and local complication may almost with absolute certainty be avoided. The permanency of cure, especially in florid ulcer, is such that there is no ground for hesitation in carrying out this operation. The method of choice is the retrocolic longitudinal gastroenterostomy of Hacker, with the short loop of Peterson and Czerny at the deepest part of the greater curvature, after the method of Kocher. This gives the best guarantee for good drainage and proper influence upon the chemistry of the stomach. Both of these are of great importance in the healing of ulcer. The anticolic longitudinal gastroenterostomy of Wolffler at the deepest part of the greater curvature fulfills these indications just as well, but by this method complications upon the part of the intestines cannot with certainty be avoided. Occlusion of the pylorus in ulcer of the pylorus is not advisable and is apparently dangerous, since restitution ad integram then becomes impossible. The danger of carcinomatous degeneration of an ulcer is lessened by gastroenterostomy, the more certainly so the earlier the operation is performed. It is clear that if there is a suspicion of carcinomatous degeneration resection should be done. In a large majority of the cases this suspicion can be confirmed clinically.

The Comparative Value of Arsenious Acid and Salvarsan in Non-Syphilitic Diseases.—Charteris (Brit. Med. Journ.) writes of the therapeutic value of inorganic arsenic and salvarsan in Hodgkin's disease, leukemia, chorea, and pernicious anemia. In all these conditions it was found clinically that inorganic arsenic was of value by causing temporary improvement, though rarely complete cure. Even in chorea relapses were common. The method of action is quite unknown. There is an effect on the blood-forming tissue in the marrow. On the theory that salvarsan might act upon the unknown cause of these obscure blood conditions, intravenous injection of salvarsan was tried, but without any results which indicated that it was of more value than inorganic acid. In pernicious anemia the intravenous injection of salvarsan had produced such an anemia that the patients in two out of three cases died within three weeks, and the third patient was not improved, though he apparently was not damaged by the treatment. Both in chorea and leukemia not only did the injection of salvarsan not cure the disease, but it even did not prevent the appearance of complications. Thus, in chorea an endocarditis ran a normal course after salvarsan, and at tacks of perisplenitis still occurred in a case of leukemia after salvarsan treatment. It was found that in rabbits salvarsan injection produced a mild stimulatory effect upon the bone marrow analogous to that induced by inorganic acid.

The Influence of Age on Pregnancy.—Marck (Gynak. Rundschau) mentions the influence of age on the first pregnancy, labor, and puerperium, in a series of 1000

primiparæ who came under his personal observation. The Dr. says that this influence cannot be disputed. The number of miscarriages in elderly primiparæ is much less than usual, but the premature labors are unusually large. Albuminuria and the nephritis of pregnancy occur more frequently in proportion to the age of the patient and the course of these complications is likewise more serious. Eclampsia is also more common in older primiparæ, but the percentage of mortality is higher in younger women. The most frequent complication after labor in young primiparæ is atonic hemorrhage. The most favorable time for the first labor is the period previous to the twenty-third year, as the smallest number of complicating conditions during pregnancy, labor, and the puerperium are noted during this time. After the twenty-third year the number of abnormal labors increases. The principal cause of trouble in elderly primiparæ is due to uterine inertia and rigidity of the soft parts, which are apt to result in weak pains, premature rupture of the membranes, increase in operative interference, and heightened mortality of the mother and child. The necessity for more frequent examinations, and either premature or delayed operative interference are also causes of future trouble. The author insists, therefore, that in such women the pregnancy must be carefully watched and the labor preferably conducted in a hospital. The morbidity of the puerperal woman also varies with the age, and increase being noted in the primiparæ. The effect of the age on the children was shown in the following observation: namely, that with advancing age of the mother a preponderancy of male children resulted, an increase in the number of pathological positions, and also in the number of dead or macerated fetuses.

Physiological Function of the Ovary.—McIlroy (Journ. Obst. and Gynec. Brit. Emp.) records the experiments undertaken to ascertain the physiological function of the different constituents of the ovary, special attention being directed toward the interstitial cells with a view to finding out the influence of ovarian secretion upon other reproductive organs and upon the organism as a whole. The results of the experiments were as follows: It was found that uterine function and nutrition seemed to depend on ovarian secretion, as atrophy occurred after removal of both ovaries, directly proportionate to the time the animal was kept alive after operation, the longer the time the more marked the fibrous changes. The muscular wall first showed atrophy, the glands disappeared gradually, but the epithelium lining of the uterus remained free longest. The mammæ and external genitals were likewise atrophied in these cases. The general development and nutrition were not affected by removal of the uterus or retention of the uterine fluid, neither were the ovaries. As follicular development and formation of corpora lutea took place the interstitial cells were not affected. No atrophy of the external genitals or mammæ followed removal of the uterus. The author believes that there is no evidence that the uterus is responsible for the phenomena of menstruation aside from being the channel for the excretion of substances generated or controlled by the ovary itself. Compensatory hypertrophy following the removal of one ovary occurred in the other in the absence of pregnancy and in the presence of retained saline fluid from the uterus. The uterine secretion did not seem to have any inhibitory effect upon the growth of the ovary and did not counteract the atrophy of the uterus after removal of both ovaries. Ovarian grafts seem to prevent atrophy for a time but ultimate degeneration takes place in the transplanted tissue followed by atrophy of the uterus. The rate of degeneration varies with the site of implantation, the more vascular the site the longer the persistence of the graft. Degeneration was found to take place first in the cells of the corpus luteum as evidenced by hyaline changes and leucocyte infiltration, while the follicles showed cystic degeneration. The interstitial cells seemed to persist much longer than the follicles and they appear to control the nutrition of the uterus, as atrophy takes place when these cells are degenerated and no atrophy results when they are present without any follicles.

Insufficiency of the Liver in Pregnancy.—Heynemann (Ztschr. f. Geburtsch. u. Gynak.) has attempted to demonstrate by chemical methods changes in metabolism, the presence of which would lead to the supposition that a so-called pregnancy liver exists and may be diagnosed as such during life. From a review of the literature and the results of his own experiments he says that we are not justified in assuming that an otherwise healthy liver is subjected to any damages during pregnancy or that its functional activities are reduced during this period. Changes in normal metabolism are undoubtedly present during this time which call for increased activity on the part of the woman's system and the individual organs, but these are met by a compensatory physiological activity. Where the organs are insufficiently developed or have been previously damaged, this in-

creased demand may not be fully satisfied, and it is only under such circumstances that direct disturbances in the function of the organ result. This is particularly noteworthy in the case of the liver because of the extraordinary significance which this organ assumes in the body metabolism. Any regular and typical functional disturbance of the liver during pregnancy has not yet been demonstrated, nor was the author able by chemical methods to trace any connection between the liver and the toxemias of pregnancy, which leads him to believe that we are not justified in attributing to the liver any definite role in the production of eclampsia. This would seem to imply that the anatomical changes in the liver which are found in these diseases are not the direct result of functional disturbances.

Treatment of Smallpox by Tincture of Iodine.—Newell (Indian Medical Gazette) says that since iodine has been proved a useful disinfectant, it occurred to him it should be of value as a paint to disinfect the skin in smallpox, and therefore lessen the aerial dissemination of infectious epithelial debris. It necessarily follows the earlier this is done the greater should be its value. He determined to use it in the treatment of smallpox as a local paint on the more exposed parts, and so began the trial by its application to the forehead, chin, neck, and the back of the hanas. Its use, however, proved it to be of much greater value than the object for which he applied it. Using it early in confluent cases he found that it materially affected the development of the pox and prevented the "pitting" of smallpox which is so horrible a result in confluent cases. It is because it has proved itself, so valuable an agent in the prevention and lessening of "pitting" that he thinks he is justified in writing this early note to enable his brother practitioners to use a valuable therapeutical agent which will modify the disease and save the patient from disfigurement. He used the ordinary B. P. tincture of iodine, and so far has limited its use to the above-mentioned parts. The application can be applied two or three times a day for a few days only and then totally discarded. The colored scabs and epithelium all come away, and, in cases treated early, leave no trace of a scar even in severe confluent cases. Both Indian and European cases gave success.

The following advantages may be claimed for this treatment: (1) Lessening and prevention (if applied early) of "pitting," (2) Modification of the disease. (3) Lessening of pain and fever. (4) Disinfection of the parts where it is applied and thereby lessening the chances of aerial infection from epithelial debris. (5) A useful method of lessening the spread of the disease among natives who refuse to go to hospital; as, if one can disinfect the exposed parts, arrangements can be made to disinfect articles of clothing covering the other parts of the body. (Before discharge from hospital his practice has been to have all patients washed or bathed in a carbolic solution.) (6) Lessening of mortality in confluent cases, since it follows if the "pox" on exposed parts mentioned can be thus abated there is so much lessening of toxemia. It seems to Newell there is further scope in this treatment to see how far the mortality can be reduced by alternate applications of the iodine to different parts of the body, so that all parts affected by the eruption can be so treated.

Potassium Iodide an Antigalactagogue.—Hodgkinson (Australasian Medical Gazette) says that in the 1895 edition of "Materia Medica and Therapeutics" by Bruce, the short statement is made that "Iodide of potassium is said to act as an antigalactagogue." After seeing, during his student days, the troublesome and tedious methods used in maternity cases, in which, because of the death of the child or for some other reason, it had been necessary to arrest the secretion of milk, Hodgkinson determined to test the value of this statement at the earliest opportunity.

The Dr.'s first experience of its use was highly satisfactory, and he has now been using it for this purpose for about twelve years with complete success.

In a large majority of the three hundred odd cases in which he has prescribed it, one dose has been sufficient to absolutely inhibit any further secretion of milk, while any discomfort present has usually disappeared in five or six hours. Occasionally a second dose is required, but only in one case was it necessary to give four doses on successive days.

His usual formula is as follows:

℞ Potassii iodidi, gr. xxx to gr. xl;
Phenazoni, gr. x;
Spt. ammon. aromat, m. xxx;
Syrupi: ℥j;
Aquæ, q. s. ad ℥ij.

This is administered as one dose as soon as the breasts become swollen and painful. If necessary, the dose is to be repeated twenty-four or forty eight hours later. The antipyrin is introduced in the prescription in order to counteract the marked tendency of the large dose of potassium iodide to cause headache.

The quantity of iodide administered is varied according to the general condition

of the patient—a strong, plethoric woman being given a larger dose than one who is weak and emaciated.

The advantage of this treatment is the absence of any necessity for restricting the patient's diet and painful massage, painful bandaging, the use of hot applications or the ice-bag, liniments, dirty belladonna plasters, and the exhibition of anodynes and exhausting doses of saline cathartics. There is also to be considered the saving of time and labor on the part of the nurse; in the case of maternity hospitals this should be an item of some importance.

The disadvantages are nil.

This treatment is equally successful in the later stages of lactation, when it becomes necessary to wean the child.

A New Treatment of Tuberculosis.—Friedmann (Deutsch. med. Wochenschr.). The theoretical basis of the Dr.'s method consists in the hypothesis that the tuberculosis antigens reside in the bodies of the tubercle bacilli themselves, and that the most promising method of treatment consists in the injection of the living bacilli themselves. All the tuberculins have this quality in common, that they contain the bodies of tubercle bacilli more or less comminuted and more or less altered by the process of sterilization. Besides the antigens, the tuberculins also contain considerable quantities of toxins; an obvious drawback from Friedmann's point of view. The Doctor, therefore, sought to find a modified tubercle bacillus, rich in antigens but nonvirulent and free from toxic substances. Such a strain of tubercle bacilli he thinks he has found. In 1903 he and Piorkowski isolated a tubercle bacillus from the body of a turtle in the Berlin Aquarium. At the time they believed this to be a special variety of the bacillus, since, while virulent for cold-blooded animals, it was entirely innocuous for warm-blooded ones. Further investigation has, however, led to the view that the water of the aquarium had become contaminated with human tuberculous sputum and that these turtle bacilli were human tubercle bacilli modified by passage through a cold-blooded organism. With this and similar strains of tubercle bacilli, Friedmann has made a vaccine, from the use of which astonishing results have been reported. The living bacilli are injected intramuscularly, a local induration resulting which is absorbed in the course of a few weeks. If, as rarely happens, an abscess forms, the injection is without therapeutic effect. This accident can be avoided by giving alternate intramuscular and intravenous injections. Up to the present, some 1,200 patients have received the treatment, one or two intramuscular injections usually sufficing. Soon after the first injection obvious signs of improvement are said to be observable, in all varieties of tuberculosis. Twelve cases of joint tuberculosis, some of them very severe in type, were healed promptly and entirely. Pulmonary tuberculosis uniformly shows prompt amelioration of all the symptoms. The first to go are usually the night-sweats; pain, cough, fever, etc., disappear later. Renal and bladder tuberculosis also do well. Cutaneous tuberculosis offers the greatest difficulties to the treatment on account of the oversensitiveness to the injections that usually accompanies it. By means of the combination of intravenous with intramuscular injections, good results may also be obtained in this form of tuberculosis. The injections are given in the immediate neighborhood of the infected area. Good results were uniformly observed in lupus of the mucous membranes. After it had become certain that the injections were quite free from danger, the Dr. began to inoculate children exposed to a tuberculous environment, the injection sometimes being given immediately after birth. All the 335 children, hitherto inoculated, bore the injections without ill result and have so far remained free from scrofula.

Some of the most eminent of the Berlin clinicians confirmed Friedmann's claims. Thus Erich Mueller reported five cases of grave bone tuberculosis, in three of which the injections of Friedmann's vaccine led to a complete cure. In the other two, abscesses formed at the site of injection. Schleich stated that he had lost his early scepticism, regarding the treatment, after seeing a number of cases of surgical tuberculosis recover without operation. Katzenstein had had the same experience. Karfunkel confirmed Friedmann's statements in every detail. He had treated 450 cases, including all varieties of tuberculosis, with uniform success. In 200 cases of pulmonary phthisis, not a single one failed to show improvement. Kuester was equally enthusiastic and considered Friedmann's vaccine at least equal to that of Jenner in importance. Blaschko reported a case of cutaneous tuberculosis that had previously resisted all methods of treatment, including tuberculin, but which appeared to be yielding to the new vaccine. Citron spoke of the theoretical justification for Friedmann's method. Goldberg had seen 23 cases of pulmonary tuberculosis recover completely under this treatment.

Three questions have been propounded, which Friedmann has not answered. They were:

1. What is the dosage of the new remedy,

and when will it be made accessible to the medical profession? (Bier).

2. How do the tuberculin reactions behave in the cured cases? (Meyer).

3. Why do abscesses sometimes follow the injections and how can a cure take place without the occurrence of reactions? (Wolff-Eisner).

Suction Drainage in Empyema.—Saakianz (Wien. klin. Rundsch.) says that the use of suction drainage in empyema is the best. A rubber disc, 10 cm. in diameter, has a hole punched in its centre in which the drainage tube fits. The skin about the wound is covered with dermatol ointment, and the rubber disc is placed over it so that its opening lies over the wound. The drainage tube passes through the hole in the disc which fits it tightly and through the wound into the pleural cavity. The disc is held tightly against the skin by means of adhesive straps and the dressings so that an air-tight covering results. The distal end of the drainage tube is attached to a flask from which the air has been partly exhausted by means of an air-pump. The dressing is changed every two or three days. It is claimed that by this method the physiological condition of the pleura is restored, a steady negative pressure equal to 50 or 100 mm. of mercury being maintained, and at the same time thorough drainage is secured. Moreover, the hyperemia induced by the negative pressure converts the purulent secretion into a serous discharge. He says that this suction drainage should be used after simple resection of a rib, and also before the radical plastic operation of Schede for chronic empyema with fistula. In this operation a large skin flap is dissected up, and a section of the chest wall removed by sawing through the ribs. The laceration of the intercostal arteries by the teeth of the saw tends to check hemorrhage, but there is often considerable shock, and it is therefore desirable to improve the general health of the patient beforehand by employing suction drainage to remove the septic discharge. This procedure will also reduce the size of the empyema cavity, and has even induced it to heal without any further operation.

The Intrauterine Recognition of Sex.—Pankow (Ztschr. f. Geburtsh. u. Gynak.) records a study of attempts to differentiate the sex of the fetus in the last months of pregnancy, which is based on the supposition that the embryonic testicles, being glandular organs, secrete substances which may be demonstrated in the blood of a woman pregnant with a male fetus. The absence of this reaction would then tend to show that a female child was present. For this purpose Pankow employed the precipitin reaction which is based on the fact that the blood serum of experimental animals previously treated with vegetables or animal albumin, developed specific reaction products, which when brought together with the albumin solution already employed give rise to a precipitation. The author first attempted to demonstrate whether with the aid of the testicular extract, differences could be shown between the male and female blood. It seemed as if the testicular juice when brought into contact with the blood serum of the same species resulted in a precipitation, and it was also found that the serum of a bull produced a more marked reaction than that of a cow. In another series of experiments made with guinea pigs the intraperitoneal injection of testicular juice resulted in the death of the animals within twenty-four hours, owing to the toxic action of the same, but in every case where the animals were injected with material which had been previously inactivated, a marked lowering of the temperature occurred but otherwise there was no change. Pankow formulates his results as follows: Foreign testicular substances when injected intraperitoneally manifest an extraordinarily toxic effect on the animal organism. The toxic action is produced by the complement which, however, may be obviated by inactivation. By preliminary treatment with normal as well as with inactivated testicular substance, antibodies are formed in the blood of the experimental animal which produce precipitation with those of the serum of the first variety. The production of antibodies which are specific only against the serum of the bull, by producing treatment with testicular substance has thus far not been possible. It is noteworthy that the direct contact of a solution of testicular juice with bull serum brings about a delayed, but well-marked reaction. Anaphylaxis is entirely without results in the attempt to differentiate sex by the blood. Although the author's experiments are generally negative in their results, he believes that this is largely due to the fact that our methods of differentiating albumins are not sufficiently developed, but that when this is attained the difference in sex may probably be determined in the manner indicated.

Defective Children.—Dupuy (Jour. de med. des enf.) defines defectives as children who by reason of lessened intelligence or inaptitude are unable to learn school lessons in the manner of normal children. They have increased in numbers so much as to threaten the intellectual and moral future of the race. They develop into inefficient,

useless people, or into the vicious, criminal, and prostitute classes. They have perversions of instinct, judgment, and moral sense. Classes for assistance for these people have been established by law in France in various places, to which are admitted the apathetic and the unstable, in order that they may be adequately taught and made as useful as possible to the community. These persons cannot be picked out by a single examination; they must be observed often for some time before being committed to institutions. They must undergo certain tests to differentiate them from the lazy, the ignorant, and the unruly. We also encounter in some families a pride which makes ii difficult to admit that these children are mentally defective, and causes them to absolutely refuse to "class them with idiots and imbeciles" There are school principals who from fear, indifference, or vanity will not acknowledge that these pupils cannot be taught in the ordinary way. To teach these pupils we must pass from the abstract to the concrete, use the senses, not the intelligence, and make lessons of all the ordinary acts of life. The zeal, patience, and self-abnegation of the instructors is remarkable. These true defectives are defective in body as well as in mind. The evolution of the body is interrupted, and we find as great physical as mental defects. The arterial pressure is low, assimilation is disordered, elimination, and retention are abnormal, the action of kidney and liver are bad, blood composition is abnormal, and ossification is retarded. The causes of retardatioa are numerous. There may be arrest of development of the brain, and thrombosis or rupture of the arteries, meningoencephalitis, and exaggerated secretion of cerebrospinal fluid. In many cases, however, there is no abnormality of the brain, and the cause of retardation is extracerebral. Nutrition and circulation are under the direct influence of the sympathetic system of which the glands of internal secretion are the excitomotor directors. They have a marked effect on development, nutrition, and growth. Many of these defective conditions may be improved by the use of "polyopotherapy-endocranienne." Often the defect is mixed, that is, it is glandular and cerebral at the same time. This treatment results in increase in height, increase of blood pressure, regulorization of the organic exchanges, and development of ideation, attention, speech, will. cerebral action and coordination of ideas. The author believes that the State should distribute these glandular extracts freely to be used in the treatment of these defectives, as is done in Hungary for the cretins, who have diminished in number under this treatment. These children should be segregated from their families while under treatment so that they may be better controlled and their nutrition supervised. They should be given lime, potash, soda, and magnesia as well as glandular extracts; and friction, massage, respiratory gymnastics, and hydrotherapy should be used. There should be special as well as ordinary medical care. Oculists and aurists should treat eyes, nose, throat and ears. The role of the physician is most important in the care and education of these defectives, for the body as well as mind must be developed and supervised. There should be a regular corps of medical inspectors in each school to supervise the medical treatment; but treatment of these children should begin as soon as the defect is recognized, not when they enter school. Institutions for the care of these children should include a service of observation, a nursery, a maternal school, and a school for adults.

Congenital Family Cholemia.—Poynton (Proc. Roy. Soc. Med.) records a case observed in a girl of eight and one-half years who had been jaundiced since birth. Her father had also been jaundiced since birth. His children were: (1) Born jaundiced; died of "convulsions" at four months. (2) Twins; lived seven and eight hours only; cause of death unknown. (3) I. S., female, aged ten ahd one-half years, treated recently in hospital for incontinence of urine, While in hospital spleen was noticed to be enlarged slightly. Soon after admission she suffered from a very slight attack of jaundice of the conjunctivæ, with slight indisposition, and followed by a noticeable enlargement of the spleen, which subsequently regained its former dimensions. This was the first time jaundice had been noticed in this patient. (4) S. S., age eight and one-half years; the patient here reported. (5) Dead child; six months, premature. (6) M. S., aged seven years; healthy; no enlargement of spleen now, and jaundice never noticed. Three years ago slight splenic enlargement.

There was no collateral family history of jaundice on the father's side, and the mother and the mother's family were free from the complaiht. The patient reported by the writer showed variable slight jaundice, a palpable spleen, stools of normal color, and occasional urobilinuria but never bile pigment in the urine. The blood serum examined during an exacerbation of the jaundice was free from urobilin or bile pigment. The Wassermann test on the blood was negative, as it was also on that of her sister, I. S. The fragility of the red blood cells, tested on four separate occasions, gave

readings of 0.6, 0.65, 0.65, and 0.65. Her father's fragility stood at 0.65 also; her sister's at 0.6. Her blood showed secondary anemia of moderate degree. An interesting feature was the demonstration in the blood by Pappenheim's "vital" staining process of "hematies granuleuses" or "reticulated red cells" in considerable numbers. These occur in normal blood in a proportion of 1 to 2 per cent. of the red cells, but are very numerous in fetal blood, diminishing rapidly toward term. They are increased in numbers in many forms of severe anemia, and are a particularly constant feature of the blood picture in acholuric family jaundice. In the patient's blood they totalled 10 per cent., 8.4 per cent., and 11 per cent. of the red cells on three occasions. In her father's blood they stood at 6 per cent., and in her sister's at 5 per cent. In her sister, who was free from jaundice, only 0.2 per cent. of reticulated red cells were found. These reticulated red cells are to be regarded as evidence of very rapid blood regeneration. The patient was treated by the application of x-rays to the splenic region three times weekly, and appeared to be much improved, the spleen becoming distinctly smaller and the jaundice less.

Physiological Influence of Ovarian Secretion.—McIlroy (Proc. Roy. Soc. Med., Obst. and Gyn.) mentions this subject theoretically and describes her own experiments which led to the following conclusions: The ovary controls the nutrition of the uterus and other reproductive organs, since removal of both ovaries causes atrophy of the muscular and glandular elements of the uterus, etc., the degree of atrophy being in direct proportion to the length of time which has elapsed since the operation. There is also a diminution in the uterine blood vessels, and a tendency to atheroma —a condition very closely allied to fibrosis of the uterus in the human subject. Menstruation and estrus do not occur after complete removal of both ovories. In young animals after cophorectomy the infantile type is maintained. Removal of the uterus, or retention of uterine secretion, does not affect the functional development of the ovaries, seeing that the elements of the ovary are well preserved after hysterectomy and ligation of the uterine hours. Retained uterine fluid does not counteract the atrophy of the uterus which takes place after removal of both ovaries. There is thinning out of the uterine wall at the point of greatest distention, and no compensatory hypertrophy has been observed. Removal of one ovary causes compensatory hypertrophy of the other in the anestrous state. That the interstitial cells perform the chief role in the maintenance of the nutrition of the uterus is evidenced by (a) the survival of these cells in grafted ovaries, (b) the follicles becoming absorbed or cystic, and (c) the fact that no atrophy of the uterus occurs when these cells are present. The interstitial cells become functionally active during proestrum, as shown by their being enlarged and their cytoplasm becoming infiltrated with a lipoid substance. That the corpus luteum is the part of the ovary which exerts the most active influence upon the body as a whole is shown by the fact that corpus luteum extract, when injected, causes rise of the general blood pressure. From the result of one experiment it was found that the ovaries do not play such an important part in the elimination of calcium as is supposed, since after castration the calcium output was increased, whereas it was diminished as the result of administration of corpus luteum extract. Removal of the ovaries in rabbits causes an increased deposit of fat in the tissuss of the body.

Coliform Organisms in the Healthy and Infected Urinary Tract of the Female.—Williams, Murray, and Wallace (Jour. Obst. Gyn. Brit. Emp.) state that typical bacillus coli is found in a considerable percentage of female urines taken under conditions precluding all source of contamination. Ordinarily they have no apparent pathological significance. Although in the writers' cases culturally identical, agglutination reactions prove that there are wide biological differences between the various strains isolated. As male urines very rarely show the presence of this organism, it is reasonable to suppose that the usual path of entry is by way of the perineum and urethra. When infection of the urinary tract is present the coliform organisms isolated show great variation in cultural reactions. Vaccines therefore should be autogenous, and since the same case may show the presence of more than one organism, vaccines should be prepared from many colonies. Vaccine treatment of coliform infections is of pronounced benefit. In acute cases, if due care be taken and the doses and intervals carefully regulated, a very marked improvement can be very speedily produced in the vast majority of cases; but, to obtain this, very close supervision is necessary. A first dose in acute cases should never exceed 10 millions, the intervals must be short and, if there be any doubt, opsonic indices should be taken. Subacute or chronic inflammations are equally hopeful, provided that the doses are suitably increased, that it is appreciated that the treatment should be coterminous

with the presence of pus in the urine, and that this may be a somewhat lengthy process. Cure does not necessarily imply the sterilization of the urine.

Retrodisplacement of tee Uterus Treated by Gilliam Method of Round Ligament Suspension.—Macfarlane (Journ. Obst. Gyn. Brit. Emp.). This paper is based on 140 cases, forty of which are excluded because only recently operated upon. In three cases the round ligaments were found to be too slender for suspension and in two cases they were torn during operation. There were no deaths; convalescence was as rapid as after other forms of suspension. One case of thrombosis with recovery and one recurrence of the displacement are recorded. Sixteen of the cases operated upon became pregnant, and no difficulty was experienced at the time of delivery. One case aborted at the third month, and another at the sixth month as the result of hyperpyrexia in connection with a febrile attack of unascertained cause. The uterus in every case inuoluted normally, and there was no recurrence of the displacement. In the early months of pregnancy all the patients complained of pain due to the stretching of the ligaments; this continued in the majority till the end of the fourth month and after this period the pain subsided. Bladder irritability was complained of in three cases. All the cases of mobile retroflexion were cured of the symptoms complained of and remain well. Those cases in which there were marked adhesions and evidence of chronic inflammatory mischief obtained complete relief of their symptoms in 85 per cent. In 10 per cent. there was still some pain, but this proportion is not unusual; 5 per cent. obtained no relief.

Sudden Death of Heredo-syphilitic Infants Soon After Birth.—Bonnet-Laborderia (Jour. des sci. med. de Lille) says that in death in heredo-syphilis immediately after birth autopsies have given most contradictory results. In many cases there are grave syphilitic lesions in the viscera, while in others most minute research gives no syphilitic signs. Still the spirochate pallida can generally be demonstrated in the blood, showing a general infection. Some of these infants appear quite normal, and it is a surprise to the accoucheur when the infant does not breathe. There must be some special mechanism causing death which is active only just at the beginning of respiration. These infants have an exaggerated development of the abdomen, the internal organs having undergone hypertrophy. This condition has been called a glandular splanchnomegaly. In many cases there is also ascites adding to the distention of the abdomen. These enlarged organs make undue pressure on the contents of the thorax, and make it difficult for the lungs to be inflated when the infant should begin to breathe. The type of respiration in the new-born babe is abdominal, the thorax having little movement therefore, the upward pressure of the distended abdomen will interfere with the respiratory action of the diaphragm. The cries and respiratory efforts of the heredo-syphilitic are feeble and last but a few minutes. In spite of the feeble efforts at respiration that are made no air enters the thorax, and death results. At autopsy the lungs are found in a state of atalectasis. The heart may beat for several minutes after the respiratory efforts have ceased. The efforts to establish respiration fail. In cases in which the abdominal organs are not markedly enlarged and ascites is responsible for the distention, tapping of the abdomen and removal of fluid suggests itself as of value in relieving pressure.

Treatment of Gastric Ulcer.—Dawson (British Medical Journal) says the medicinal treatment of gastric ulcer is as follows:

Keep the alimentary tract clean and healthy; keep gums and teeth from sepsis; treat tonsillar and nasopharyngeal infections. It needs to be emphasized that there is all the difference between action and evacuation of the bowels. Fecal stasis is consistent with regularity in defecation. An infection may start high or low in the tract—a low-grade gastritis, colitis, or appendicitis, or one may follow the other. Reasonable feeding is important, because it enables stomach and intestine to functionate well. The gastritis associated with mucous ulcer is of a toxic character, and there is no evidence that the irritative gastritis—say of tea and alcohol—carries with it any special proneness to ulcer.

Our diagnosis of mucous ulcer from the gastritis which accompanies it is of no practical moment, for the treatment is the same. The danger lies in missing an ulcer which is becoming chronic or one that is threatening to perforate. The points to pay attention to are the persistence of pain and tenderness after the patient has been put to bed and the history of previous illness. In mucous ulcer and gastritis the symptoms disapper quite quickly, and light solids and even iron are tolerated in a few days, whereas if there is an ulcer becoming chronic, the tenderness and pain and intolerance to solid food persist longer, and there will often be a history of previous attacks.

The response of the mucous ulcer to

treatment is a contrast to that of the chronic ulcer. The great thing is rest. With this, with milk or light solid diet, with the treatment of the cause, and with bismuth and soda for a few days, followed by iron and arsenic, the cases respond promptly—so different from the difficulties with chronic ulcer.

As to chronic ulcer, it may be said that whatever be the cause of the ulcer, it is abundantly clear that acidity of gastric juice plays an important part both in its production and its continuance. An essential element in its treatment therefore is to remove the causes of excessive acidity, whether those causes in any given case reside in the stomach or outside it. It is further necessary to prevent the accumulation of acid, especially when there is no food in the stomach, or, failing this, to bind or neutralize it. There is no doubt that an ulcer on the road to healing will be set back by a bout of acidity. The pain that will sometimes awaken a patient at night is a symptomatic expression of this fact.

The motility of the stomach is seldom diminished, sometimes the reverse—for example, duodenal ulcer. The aim should be to limit its movements to what are required for the voiding of food and gas.

Rest of body in bed will rest the stomach, for thereby movement is diminished, and the food requirements are lessened.

The food must be such as to produce the least stomach effort. Milk is the best to commence with, and it should be continued for three weeks. Eggs may be given with it. After three weeks the diet may be extended. Food must be finely divided and easily digestible, given in small quantities every two to three hours, with a dose of alkali at the intermediate hours. This will provide for the day, but the stomach must not be left to itself at night, or acid will form, pyloric spasm will be set up, and the healing work of the day will be undone. A dose of alkali before going to sleep, and even food or alkali in the middle of the night, may be desirable. Sometimes food alone is sufficient, but keep down the stomach acidity at night.

Every physician should be acquainted with the rationale of operative treatment, and should be jointly responsible with his surgical colleague for its employment. It follows that the principles underlying an operation, as distinct from its technique, are within the sphere of a physician, and therefore proper in this discussion.

Where there is a structural narrowing at the pylorus the indications for gastroenterostomy are as clear as the mode by which it gives relief. In no other gastric condition does the operation give such excellent results. He urges that structural pyloric stenosis should not await diagnosis till such obvious signs as visible peristalsis and bulky vomitings have put in their appearance. Careful routine examination, including such means as test supper, inflation, and the bismuth meal, will usually disclose the condition.

When there is no structural stenosis the way in which gastroenterostomy helps is not so clear. Some say that for such conditions as ulcer of the duodenum and the lesser curve it is unsound treatment. Arbuthnot Lane holds this view.

He says the facts definitely show that chronic ulcers, wherever situated, are benefited by short-circuiting, though cure can be spoken of with more confidence where the ulcer is near the pylorus than elsewhere.

The reason why gastroenterostomy is more successful now than it was is not only because of improved technique, but because —unlike formerly—it is only done in suitable cases to achieve clearly defined objects, and not as a thoughtless remedy for any intractable gastric case.

Miscellaneous.

Treatment of Snake Bite by Potassium Permanganate.

Bannerman investigated the treatment of snake bite by permanganate of potassium in consequence of representations made by Sir. T. Lauder Brunton to the government of India. In the first series of experiments, natural conditions of biting were imitated as closely as possible. The dose was given by the actual bite of the cobra or daboia, and it is noted that, after having bitten, the cobra remains attached to his prey for an appreciable time, while the daboia darts with incredible rapidity and releases its victim instantly. The latter occasionally fails in its stroke. These experiments showed that: 1. A dog bitten by a cobra cannot be saved by the local application of powdered potassium permanganate rubbed in after free incision of the bitten place; nor by a similar application of a solution of the powder. 2. It may be saved by the immediate subcutaneous injection of ten c.c. of a five per cent. solution of the drug; but that this solution is so strong as to act as an escharotic. 3. If this treatment is delayed for even two minutes, it loses its efficacy. 4. A dog bitten under natural conditions by a Russell's viper, daboia, cannot be saved by the drug, however applied. Another series of experiments was carried

out, in which an attempt was made to inject the drug intravenously, but it was found that the intravenous injection of even forty c.c. of a half of one per cent. solution of potassium permanganate caused death from intravascular clotting. Next, the minimum lethal doses of the venom of these snakes for dogs were determined. It was also determined that the venom of both in solution was neutralized in vitro by half its weight of potassium permanganate in five minutes. Then it was shown that even four times the amount that serves to neutralize the venom in a test tube will not with certainty prevent fatal paisoning in an animal which has received ten minimum lethal doses. It was also found that crystals of potassium permanganate, when rubbed into incisions in a dog's leg, produce extensive ulceration, and that, when combined with the local action of daboia venom, they may cause even necrosis of the small bones. Bannerman remarks: "The conclusions as to the action of potassium permanganate powder on small doses of cobra venom injected just under the skin appear to be that this treatment is of some little use under these highly artificial conditions. It must be remembered, however, that a snake does not deposit its venom under the skin, but, striking as it does with its fangs at right angles to the skin, the poison must usually be placed well below the fascia of the part, and therefore further removed from the applications of a chemical antidote. With regard to dabola venom injected just under the skin the results are very similar to those obtained with the venom of the cobra, i.e., that under such artificial conditions the treatment by free incision and rubbing with powder of potassium permanganate is of some little use. As a practical measure for employment after actual snake bite it appears to be of no use whatever."—Indian Medical Gazette.

Broncho-Pulmonary Cancer.

Renon points out that modern therapeutic and surgical methods have modified the outlook in the case of many neoplasms which at one time may have seemed incurable; and although in broncho pulmonary cancer a definite cure may be the exception, provided an early diagnosis of the malady is made, life may be prolonged and rendered tolerable. Until quite recently the ordinary clinical procedures of percussion and auscultation yielded discordant results. Radiography, however, facilitated diagnosis in some of these cases, but not in all, as it is often difficult to determine the exact nature of the affection from the shadow, pulmonary syphilis and tuberculosis both being possible complications. Bronchoscopy gives more precise results, and in this connection the author formulates four stages in diagnosis—the clinical stage, the radioscopic stage, the bronchoscopic, and the bioscopic. He relates the case of a patient, aged 51, who was first attacked by a feeling of oppression in the chest. This was attributed to arteriosclerosis, but, in spite of treatment directed to securing hypotension, the condition persisted. There was severe cough, but auscultation revealed only some bronchial rales. Soon after there was complete aphonia, and a laryngoscopic examination showed complete paralysis of the left vocal cord. Aneurysm was suggested, but negatived; and although radioscopy showed enlarged mediastinal glands there was no tuberculo-reaction. The Wassermann reaction was also negative. Bronchoscopy was then carried out, and revealed a state of intense tracheitis, while on the left bronchus was seen a reddish growth, which bled readily. The growth was flattened and spread out. Microscopic examination of a portion of the growth showed it was epitheliomatous. Removal was impossible, as it was not pediculated and had evidently infiltrated. Sulphate of radium was given by injection, and under its influence the bronchitis diminished, and the blood-stained expectoration became less, as did the dyspnoea. This treatment was continued for a time, but fresh symptoms of compression appeared, accompanied by rapidity and irregularity of pulse. Selenium was now tried on account of its liquefying action on new growths, being injected twice a week intramuscularly. The symptoms became more and more urgent, however, and the patient succumbed. In the author's view the therapeutic benefits of selenium have still to be determined. Leinhartz, the author states, has practiced partial pneumectomy in some of these cases. The new growth is generally primary.—Brit. Med. Jour.

The Diagnosis of Ureteral Calculus.

Casper says the subjective symptoms are renal colic, painful urging to urinate, sense of pressure in the region of the stone. But these symptoms may also be absent. The diagnosis is probably rarely made by palpation. Examination of the urine is important. The author has observed that blood and hyaline casts are not only found in nephritis, but especially in ureteral calculus. Catheterization of the ureters may lead to the diagnosis. It is noteworthy that various derangements of renal function may occur, but may also be absent. The X-ray is of course valuable, but we must not be misled by shadows in the pelvis, phleboliths, calcareous glands and exostoses of the pelvic

bones. For a certain diagnosis the author recommends to pass a ureteral catheter provided with a metal mandarin. The X-ray picture will then show whether the stone is in the ureter or not, for shadows in the pelvis generally lie outside the region of the sound. If they lie along the course of the sound, another photograph taken from a different angle will aid in the diagnosis. The author does not advise to operate at once. From the injection of glycerin into the ureter through the sound armed with an inflatable balloon the author has succeeded in bringing about a cure. If this proves unsuccessful the case is operated, extraperitoneally.—Abstr. Zentralbl. f. Gyn.

Aortic Regurgitation.

Referring to the treatment of this condition Seymour Taylor states that whatever be the cause, the first essential in an early case is complete rest in bed or on a couch. This is more important for the mending of an incompetent aortic valve than for (say) a fractured femur, or even for an aortic aneurism.

Notwithstanding a long period of complete rest after acute rheumatism, it should always be remembered that aortic incompetence may supervene some months after apparent recovery or discharge from hospital and all the time we imagined that the valve was intact.

When aortic valve failure has become a fixed and incurable lesion, other problems arise. Two distinct classes of patients will present themselves for decision. Contrast the man of wealth and leisure with the one who has to work, and possibly labor hard, for his daily bread, and the support of his dependents. Taylor's experience shows that the former lives, on the average, twice as long as the latter.

The pregnant woman should have her parturition eased by instrumental assistance. In every case constipation must be avoided. Alcohol, except in the most diluted strength, should be forbidden. Certain symptoms which are common require palliative measures. These patients suffer from flatulence, both in stomach and in the colon. Therefore fluids should be restricted; food should also be given in small quantities; a fast of one day a week is often of great advantage, as by this means we lessen the heart's toil. It is surely better to take some of the load off the struggling horse rather than to stimulate or goad it to extra exertion. Great relief may be afforded by the passage of a tube into the stomach; but this is a procedure which demands caution. Enemata or a long rectal tube will usually evacuate large quantities of gas from the colon and lower bowel.

Taylor has found great advantage accrue to the patient by prescribing a dietary which shall consist of small meals, in which animal food predominates, the carbohydrates especially being cut down to a minimum. Strong tea, coffee, and any excess in the use of tobacco should be forbidden. The patient should, if his circumstances will allow, have a prolonged rest in bed, with periods of shorter rests from time to time; and even during these rests he should be shut off from all business worries, or mental anxieties which might be calculated to increase the frequency of his cardiac action. By these means not only is the laboring heart afforded the opportunity of self-recuperation, but flatulent indigestion is prevented; for we must remember that the stomach is only next door neighbor to the heart, and when both organs are distended the distress is a double one, the cardiac being the more urgent.

As regards tonics, Taylor advises the use of such as would be employed after any debilitating illness. They include iron in small doses, with some bitter infusion, as nux vomica.

But this class of case is comparatively rare. The majority of patients who suffer from aortic insufficiency are the victims of some form of toxemia—rheumatic, septicemic, syphilitic. Obviously, if any one of these diseases is present, we shall be assisting in the heart's recovery by prescribing salicylic acid or its compounds, or by ordering mercury, potassium iodide, or both, as the case may be. The treatment is constitutional for the most part.—The Practitioner, London.

Degeneration of the Suprarenals and Other Glands in the Termination of Severe Infections.

Dumas and Harvier (Bull. et Mem. Soc. med. Hop. de Paris) record ten cases in children, aged from four to fourteen years, suffering from typhoid fever, acute nephritis, pneumonia, scarlet fever, or diphtheria, who all presented a terminal syndrome characterized by vomiting, profuse green diarrhœa coinciding with sudden aggravation of the general condition, a fall of temperature, and the appearance of a scarlatiniform, morbilliform, or polymorphous rash. The syndrome was not always complete: thus the erythema might be absent, or there might be a rise instead of a fall of temperature. Two symptoms, however, were always present—extreme and early prostration, and a sudden fall of blood-pressure which, combined with other symptoms, suggested suprarenal insufficiency. In all these cases there were multiple lesions

in the various glands. Some appeared to be in a condition of functional hypertrophy, such as the thyroid. In others, such as the parathyroids and hypophysis, there was no notable change. In the suprarenals the lesions appeared to predominate, and consisted of albuminoid and granulo-fatty degeneration with œdema or degeneration with hæmorrhage, both ending in necrosis. The writers therefore regard the terminal syndromes of grave infections as the result of acute polyglandular insufficiency with suprarenal predominance, the symptoms of which may be mitigated by suprarenal medication.—British Journal of Children's Diseases.

Convalescence from the Exanthemata.

The first two or three months of the year are usually characterized, in the experience of the family physician, by the occurrence in his practice, of a crop of cases of the contagious diseases of children, especially scarlet fever, measles, German measles, etc. This is accounted for by the readiness with which contagion is spread in the schools, when ventilation of the school room is the least perfect and the closer housing of school children during school hours favors the distribution of communicable diseases. As the diseases in question are self-limited in nature, expectant and symptomatic treatment, together with precautions as to isolation, etc., is about all the physician is called upon to direct. It is well known, however, that in all but the mildest cases, the adolescent subject of scarlatina, or measles, is usually more or less debilitated or devitalized, when convalescence is established. Special care should be taken to avoid the administration of any tonic or reconstituent which is likely to disturb the child's digestion or, by inducing constipation, to minimize the appetite or desire for food.

Pepto-Mangan (Gude) is the ideal reconstructive tonic for these young patients, because it is pleasant to the taste, easily tolerable by the stomach and readily assimilable by blood and tissue and promptly efficient in restoring appetite, strength, color and general well-being.

The Pallid School Girl.

In view of the modern methods of education, which force the scholar at top speed, it is not to be wondered at that the strenuous courses of study prescribed for the adolescent girl more than frequently result in a general break down of both health and spirits. Each winter the physician is consulted in such cases and almost always finds the patient anemic, nervous and more or less devitalized. In most instances a rest of a week or two, together with an efficient tonic, enables the patient to take up her school work again with renewed energy. Pepto-Mangan (Gude) is just the hematinic needed, as it acts promptly to increase the red cells and hemoglobin, and to tone up the organism generally. It is particularly suitable for young girls because it never induces or increases constipation.

State Board Examination Questions of Tennessee.

ANATOMY.

1. Name the bones that form the wrist and hand.

2. Name the bones which, when joined together, form the shoulder-joint.

3. Describe the sternum and give number of bones connecting with it.

4. Name the muscles that flex and extend the arm at elbow-joint.

5. Describe the nasal fossæ.

6. What bones enter the formation of the nasal fossæ?

7. Name the articulation of the occipital bone.

8. Give a general classification of bones, and describe each class.

PHYSIOLOGY.

1. Define the terms (a) osmosis; (b) endosmosis; (c) exosmosis.

2. Describe ovulation.

3. How are the different sounds of the heart produced?

4. Name and describe the salivary glands.

5. Describe the act of micturition.

6. What constitutes a reflex act? Give an illustration.

7. How is audition accomplished?

8. Describe the red blood corpuscles; (b) the white corpuscles; (c) what is phagocytosis?

CHEMISTRY.

1. What is the usual composition of urinary calculi? Give the test for recognizing the principal ingredient.

2. What chemical reaction takes place when H_2O_2 is applied to sloughing wounds?

3. Give the chemical action of chlorinated lime in the disinfection of typhoid fever stools.

4. Describe your method of procedure in making a chemical examination of suspected urine.

5. Give an explanation of the formation of ammonia in the urine.

6. Give two chemical tests that you would use in water supposed to be contaminated by sewage.

7. Give the physical and chemical properties of hydrochloric acid. How is hydrochloric acid prepared?

8. Give tests for the purity of chloroform.

MATERIA MEDICA.

1. Name four alkaloids of opium, and dose of each.

2. Name three principal salts of potassium and dose of each.

3. Name three medicines which act as galactagogues.

4. Name five drugs containing large quantities of tannic acid.

5. Name three of the most important mineral acids and give dose of each.

6. Name three medicines which produce rashes.

7. What are the effects of digitalis in medicinal doses?

8. What is the adult dose of the following tinctures: Belladonna, aconite, valerian, veratrum, and hyoscyamus.

PATHOLOGY.

1. Describe a pathologic condition produced by excessive use of alcohol, other than its effect on the liver and stomach.

2. Describe a pathologic condition produced by tuberculosis, other than the lung.

3. Define torticollis, pleurodynia, hemiplegia, gastritis, and gastralgia.

4. Give the pathology of pellagra.

5. Describe the pathology of the tonsils and pharynx in diphtheria.

6. Describe the pathology of the mucous membrane of the large intestines in mucous colitis.

7. Describe the pathology of the large intestines produced by constipation.

7. Give pathology of acute pleuritis.

X-Ray Injuries Not an Accident.

A writer in the Augsburger Postzeitung reports the case of an electrician who was employed for fifteen years in the x-ray room of an orthopedic clinic and had suffered from a chronic affection of the skin of the hands and face resulting from constant exposure to the rays. He was finally incapacitated, and applied to his trade union for the indemnity for accideutal injury during employment. The union refused such indemnity, stating that the injury complained of was not due to any accident, but was really an occupational disease, not to be indemnified according to the terms of insurance. An appeal to the courts was decided in favor of the union's interpretatiou of the agreement.—Zeitschrift fur Versicherungs Medizin.

Edema of Conjunctiva from Acute Frontal Sinusitis.

Wright reports the case of a man who was first seen on May 23 with severe left frontal headache, and edema of the inner portion of the left conjunctiva, lids and orbit, and with a conjunctival hemorrhage. There was a history of a similar attack fifteen pears ago. There was pain on extreme deviation of the eyes to the left, with slight diplopia. The septum was deviated to the left, blocking that side. No nasal discharge. The septum was resected on May 26, with relief of the headache, and the swelling subsided. There has been a little left nasal discharge since the septal operation.—Proceedings of the Royal Society of Medicine.

Congenital Atresia of the Esophagus.

W. P. Shukowsky and A. H. Bacon report the case of an infant that manifested a slight degree of asphyxia at birth and that was not able to perform the act of sucking. There was a persistent discharge from the nose of a tenacious grayish white secretion. Death occurred in forty-eight hours. At autopsy there was found a dilatation of the esophagus that terminated below in a blind pouch. This communicated by means of a slit-like fistula with the trachea.—Archiv fur Kinderheilkunde.

Life of Connective Tissue Outside of Organism.

Eveling performed a series of experiments which showed that connective tissue can be kept in a condition of active growth outside of the organism for more than eleven months, that its mass increases considerably, and its power of proliferation, after such a long period, is more active than at the beginning of its life in vitro.—Journal of Experimental Medicine.

The spring clinic of the American Association of Orificial Surgeons will be held in the Surgical Amphitheatre of Hering Medical College, corner of Wood and York Streets, Chicago, Ill., April 23-4-5-6. Dr. E. H. Pratt, A.M., M.D., LL.D., and assistants will operate on clinical patients, demonstrating the fundamental principles of Orificial Surgery as applied in the treatment of chronic diseases and as an adjunct to major surgery in general.

On April 26th, the fourth and last day of the clinic, Dr. Pratt and assistants will demonstrate other therapeutic measures which have been recently introduced to the medical profession; including abdominal calisthenics, manual therapeutics, htgh frequency treatment of internal organs, spondylotherapy and new hydro-therapeutic measures. These measures will be introduced and demonstrated not as curative measures within themselves alone, but as

adjuncts to the ordinary armamentarium of the physician.

Tuition to this clinical course is free to all practicing physicians, medical students and nurses.

Physicians are invited to bring clinical cases for operation. No operating fee will be charged. Excellent hospital accommodations will be provided. Opportunity will be presented for the physicians bringing clinical cases to assist personally in the operation.

The clinic headquarters will be ihe Hotel La Salle where reservations may be made in advance. For further information address the Secretary of the Association,

W. A. GUILD,
Des Moines, Iowa.

At a meeting of the Berlin Medical Society, recently, Dr. Friedrich Franz Friedmann announced briefly the results of his method of treating tuberculosis by vaccination with living cultures of an avirulent tubercle bacillus. But though vouched for to a great extent by some members of the faculty present, whose judgment is worthy of all respect and who had themselves sent him patients for treatment, his results, which seem to have been wonderfully successful, will not lend themselves readily to critical judgment until published more fully, and in scientific form. The exact nature and the origin of the cultures, and the details of preparation of the vaccine were noi disclosed. Nea ly twelve hundred patients, including some two hundred and fifty cases of pulmonary tuberculosis, have been treated during the past few years with one, two, or at most three, injections, generally, it is claimed, with immediate results, such as the healing of long standing sinuses in bone cases, and the disappearance of symptoms and gradual clearing of physical signs in phthisis, in cases not absolutely hopeless. So assured is Friedmann of the harmlessness of his preparation that he uses it as a prophylactic, and has treated in this way large numbers of healthy infants, chiefly such as were unusually exposed to tuberculous infection. This was considered unjustifiable by many doctors present, and called forth vigorous protests. It was pointed out that the injection of living bacilli, even though proved to be avirulent, must always involve risk, owing to the very real possibility of their suddenly acquiring virulencer It seemed to be agreed, however, that a genuine advance had been made, and along the most promising lines; and one can only hope that the great desideratum may, indeed, have been found. —The Canadian Med. Asso. Journal,

Retention of Foreign Protein by the Kidney—A Study in Anaphylaxis.

Pearce found that extracts of the kidneys of normal rabbits prepared one, two, three, and four days after the intravenous injection of egg-albumin and horse serum have the power to sensitize guinea pigs to a second injection of these proteins. The sensitization by first and second day extracts was constani and intense, that by the third day extracts was less marked and sometimes was not evident, and that by the fourth day extracts was only occasional, and when present was always weak. Comparative studies of the power of the blood, liver, and kinney to sensitize, indicate that this sensitization depends on the content of foreign protein in the circulating blood and not upon its accumulation or fixation in the tissues of an organ. This opinion is supported by other experiments in which the sensitizing power of the blood and of the extracts of unwashed kidneys was compared with the sensitizing power of extracts of washed kidney. The weak sensitizing power of washed kidney extract if taken as evidence that foreign proteins of the kinds used are not held in the tissues of the kidney, and if these results may be applied to nephrotoxic proteins, it follows that nephritis is not due to selective and persisting fixation of a protein hy the renal cells, but is due to the action of such protein merely during the process of its elimination. In experimental acute nephritis of the type due to uranium nitrate, the power of sensitization to egg-albumin is prolonged for twenty-four hours, and in the chromate type for forty-eight hours, thus indicating that in nephritis, of the acute type at least, the elimination of a foreign protein is delayed. Attempts to study by the same methods the elimination of vegetable and bacteriol proteins have failed.—Journal of Experimental Medicine.

Report on Friedmann Cure.

Surgeon Blue of the Public Health Service issued the following statement in Public Health Reports of March 21: "On March 8 the Secretary of the Treasury on the recommendation of the Surgeon General of the Public Health Service caused a board of medical officers to be detailed to make a thorough investigation of Dr. Friedmann's alleged cure for tuberculosis. These officers proceeded immediately to New York and arranged with Dr. Friedmann for demonstrations of his remedy upon persons suffering from tuberculosis. These demonstrations are being carried on in certain New York hospitals through the courtesy of their respective authorities, and will be continued

until sufficient information has been obtained for the forming of an opinion as to the merits of the treatment. Dr. Friedmann has submitted to the board a culture of the media which he states are used in his method of treatment. In addition to the observation of persons under treatment by Dr. Friedmann, the board of officers will make experiments to ascertain whether this culture is as Dr. Friedmann claims, harmless to warm-blooded animals. Considerable time will necessarily be required to carry out these investigations. The work will be carried out as rapidly as possible. In the meantime the public is informed of the inadvisability, in the great majority of cases, of traveling long distances in the hope of receiving the treatment, as those selected for demonstration purposes constitute only a small proportion of applicants. Certain statements purporting to be expressions of the board of officers of the Public Health Service carrying on the investigation have appeared in newspapers. These officers have expressed no opinion and will not be in a position to do so until the work has advanced sufficiently far to warrant some conclusion in regard to Dr. Friedmann's treatment."

Transplantation of Bone Marrow.

In a preliminary notice, Chiari records some experiments which he has carried out on the transplantation of bone marrow (Muench. med. Woch.). Having first attempted to implant the medulla of the sternum or of the femur into the space under the fascia of the rectus abdominalis or into a preperitoneal pocket, without success, he turned his attention to the spleen as a possible site for the transplantation. He removed a portion of the medulla of the femur of a rabbit and inserted it into the parenchyma of the spleen of the same animal through a narrow canal prepared by a blunt probe. The capsule was then sutured over the wound, and the abdomen closed. Some technical difficulties were met with on account of the hæmorrhage arising from the spleen and other causes. The whole animal, with the exception of the splenic region, was then exposed to X-rays with the object of producing a general damage to the bone marrow still in situ. Apart from an abortion, no harm was apparent from the rays, and after five months, during which time the rabbit remained well, it was killed. The examination showed that the piece of marrow was not only still alive, but proliferation of medullary cells (erythroblasts, myelocytes, etc.) was found. There was a small splinter of bone at the lower edge. It appears that the piece of marrow of the size of a millet seed had grown to that of a pea.—British Medical Journal.

Aberrant Thyroid Tumor from the Base of the Tongue.

W. G. Howarth reports the case of a patient who complained of great difficulty in swallowing with occasional attacks of dyspnea. The tumor involved the base of the tongue in the middle line and was pressing against the lingual surface of the epiglottis. There had never been any symptoms of thyroid insufficiency. The thyroid in the neck was scarcely palpable, but at the time of operation, when a preliminary laryngotomy was performed, both lateral lobes were found to be present, though no trace of the isthmus could be detected. The section showed a fibrous capsule outside a layer of thyroid glandular tissue; the center of the tumor was made up of blood-clot.—Proceedings of the Royal Society of Medicine.

Coxa Vara of Infancy and Congenital Luxation of the Hip.

Petit de la Villeon (Gaz. hebd. des sc. med.) draws attention to a sign which he considers, in the absence of radiography, is diagnostic of coxa vara—namely, internal hyporotation. The patient is exkmined in the following manner: The child is laid on the healthy side, the suspected thigh flexed to a right angle on the pelvis, and the leg to a right angle on the thigh. The surgeon faces the child and seizes the condyloid process of the femur, the knee is kept above the table, the femur resting in an horizontal plane and parallel to that of the table. The surgeon then performs internal rotation of the femur, and at the maximum of this movement measures the angle made by the leg; if this represents 45 degrees the articulation is normal, if 90 degrees = congenital luxation, if 25 degrees or under = coxa vara.—British Medical Journal.

Conquering Tuberculosis.

A timely article on a subject of universal interest is "The Economical Administration of the Crusade Against Tuberculosis," by Dr. Lawrence F. Flick, in the April Lippincott's.

"For the purpose of stamping out tuberculosis, we must place our chief reliance upon keeping those who have not got tuberculosis from getting it," says Dr. Flick. "With no new implantations, the disease will become extinct when all existing cases have recovered or finally succumbed. This can be accomplished by scientific supervision and control of every contagious case, for the purpose of preventing it from giving

implantation to a new case; but each case must be kept innocuous from the first moment that it is contagious until the very last.

"In every case of ulcerative tuberculosis there is a rather long period in which the contagion is intermittent and mild; a somewhat shorter period in which it is continuous and mild; and a still shorter period, usually about three months before death, during which it is intensely contagious. Protection is of value—and therefore important—in proportion to the danger; and the best protection is of no value when there is no danger.

"The great danger incident to the last period, when the patient is confined to the house and usually to bed, is due to the fact that he is in an enclosure. 'Walking' cases do not often give new implantations. The resistance of human beings is too great. Most people can even resist tubercle bacilli day and night for some time until there has been an accumulation capable of breaking down the resistance. This breaking-down occurs most frequently in those who are caring for an advanced case in the bosom of the family, worn out with vigils, overworked, oppressed with sorrow, and sometimes emaciated with want; or in those who have taken up quarters which have become contagious environments by reason of the profuse throwing out of tubercle bacilli by former occupants. Ordinarily, one does not contract tuberculosis on the street, in the street-cars, in church, by casual contact with tuberculous subjects, or by sleeping for a night or two in a room which has been occupied by a consumptive. But during the last few months of life, the tuberculous subject gives off tubercle bacilli in such great profusion that few people can live in the environment thus created without getting an implantation, *unless the tuberculous individual is or has been kept under scientific supervision and control.*

"Such supervision *can* make even such a patient harmless, but only when it induces the consumptive to deposit all broken-down tissue in a vessel which can be held close to the mouth, cleanse his lips after each expectoration, hold a paper napkin before his mouth when he coughs, dispose of the utensils and material used for these purposes in a way to contaminate nothing, and immediately change and sterilize bed and body linens when sputum gets on them. And all of these things must be done exactly right, and done always, or else the purpose of the supervision is defeated.

"Only the well-to-do can afford such supervision and control, since it has to be kept up for a long time. The efficient poor, that is, the working poor, and the dependent poor, or paupers, can get it only through money contributed by private charity or taken out of public taxes."

Plain Living and Attention to Business.

President Wilson's manner of taking up the public business has undoubtedly met with wide approval. It is a matter of satisfaction to know that he will, at least for a long time to come, devote himself strictly to his official duties and decline all invitations to travel about the country or to speak at dinners or upon miscellaneous occasions. The practice of doing these outside things is a wholly new one: and a return to the former custom of the office is much to be desired. There has been great growth of luxury and ostentation in Washington, and this has had its insidious effect upon the standards and the efficiency of governmental work. It appears that there is to be a regime of plainer living, just as it is quite obvious that there is to be higher thinking.—From "The Progress of the World," in the American Review of Reviews for April.

Chloroform Toxemia.—Nuthall (Birmingham, England, Medical Review) says the conclusion of the whole matter, as it would appear from clinical experience and research, may be shortly stated thus:

1. Never administer chloroform if etherization be possible, even to children or pregnant women.

2. Avoid carbohydrate starvation, or any other form of starvation, before operation.

3. If chloroform must be used, administer dextrose or bicarbonate of soda freely for days beforehand, especially if the patient be young or his condition septic.

4. If post chloroform poisoning develops, administer freely soluble carbohydrates (dextrose) and bicarbonate of soda, in the worst cases injecting the dextrose into the subcutaneous tissues and rectum, or even intravenously.

Accidents after Salvarsan and Neosalvarsan.—Gaucher (Annales des Maladies Venereal) reports further toxic effects, some of them fatal, not only from salvarsan, but also after neosalvarsan. The manifestations were as follows: (1) Vertigo, headache, and unilateral deafness three months after three injections of salvarsan; after four injections of calomel the vertigo disappeared, but the deafness and headache remained. (2) Another case of unilateral deafness three months after three injections of salvarsan. (3) A case of death six days after the third intravenous injection of salvarsan. The patient was a young man aged twenty-one in robust health, and the symptoms were retention of urine and

coma. (4) Retention of urine, albuminuria, icterus, and uremic symptoms, which only yielded to bloodletting, in a healthy young man of twenty, who had a chancre three months previously.

With regard to neosalvarsan, Gaucher reports two cases: (1) A fatal case in a young woman, five months pregnant, who died, after convulsions and coma, two days after the second injection of neosalvarsan (0.6 gramme). (2) A case of paraplegia, occurring four days after an injection of neosalvarsan in a young girl with ocular lesions due to heredosyphilis. Gaucher considers the paraplegia due to the toxic effect of arsenic. He also reports several cases of severe recurrences after salvarsan, including the case of a man who had chancriform ulcerations in the same place as the original chancre, followed by recurrent roseola, adenopathy, mucous patches and alopecia, five months after injections of salvarsan, and six months after the first chancre.—British Medical Journal.

Vaccines in Puerperal Sapsis.—Rowlette (Journal of Obstetrics of the British Empire) says that during the past two years vaccines were employed in 54 cases, in 39 of which the treatment was based on a bacteriological diagnosis. The diagnosis was made from lochia by Doderlein's method; the introduction to the uterus with the aid of a speculum of a bent sterile glass tube, suction then applied by a syringe, the withdrawn tube being sealed and sent to the laboratory. Thirty-one of the 39 cases were of the streptococcal infection, the remaining eight of the staphylococcal. The doses given were, in the case of streptococci, 2½ to 10 millions; in the case of staphylococci, 20 to 50 millions. Injections were given at intervals of forty-eight hours. The typical result of an injection was a drop in temperature and pulse occurring in from twelve to thirty-six hours. In staphylococcal injections better results were got by combining the use of anti-streptococcal serum with that of the vaccine. Three deaths occurred in the streptococcal series. One patient was in advanced phthisis, another was moribund from gangrenous appendicitis when she entered the hospital; the third showed considerable improvement under vaccine treatment, but died from an abscess of the lung when the supply of autogenous vaccine had been exhausted. Of the staphylococcal series, one patient died of pyemia, the result of thrombosis of the ovarian veins. Tables of the cases are given with charts showing special points. He comes to the following conclusions: (1) Vaccines in small doses do no harm in puerperal sepsis; (2) in the majority of cases they do good; (3) in many cases they produce immediate and marked improvement; (4) autogenous vaccines are more trustworthy than stock vaccines, and sometimes succeed rapidly when the latter fail; (5) anti-streptococcal serum given simultaneously increases the effect of streptococcal vaccine; (6) to get the best results accurate bacteriological diagnosis is necessary.

Paratyphoid Fever.—Hay (Liverpool Medico-Chirurgical Journal) says that paratyphoid fever was described by Schottmuller in 1910. He says that probably about 3% of so-called typhoids in London are really suffering from paratyphoid, and that in some parts of Germany and America the percentage is trebled. Many of the cases are clinically indistinguishable from a mild form of typhoid fever. There is pyrexia of one or two weeks' duration. The spleen is enlarged, and may be palpated and is harder than is the rule in typhoid fever. There are rose-red papules and distension of the abdomen. The patient is dull, and apathetic, and the tongue is furred. The onset may be insidious, or it may be abrupt and sudden, with some headache and muscular pains, vomiting and diarrhea. A sore throat is not uncommon, and herpes facialis is a well recognized complication. Smith describes these irregular forms: (1) A pyemic or septicemic type characterized by rigors and intermittent fever. (2) A gastro-intestinal type characterized by vomiting at the onset and severe diarrhea, blood and mucus being passed; and (3) the ambulatory type. The diagnosis can be made with certainty by the isolation of the bacillus from the blood or feces. Agglutination tests, when carefully carried out, may, however, yield valuable evidence, and afford reasonable justification for a positive diagnosis. The writer reports three sporadic cases. The first began as an ordinary acute food-poisoning. There was temporary recovery, and then a serious and fatal relapse, characterized by symptoms differing markedly from those of the initial illness. The second case presented some of the features of enteric fever, but the clinical evidence was not sufficient to justify a positive diagnosis. The third case began suddenly with symptoms very characteristic of influenza. There was a transient recovery, followed by a tedious febrile illness.

The author draws the following conclusions: (1) It is well to recognize that an appreciable percentage of the cases certified as typhoid fever are really suffering from a paratyphoid infection. The public health returns are to this extent incorrect; and as the death rate from paratyphoid is very low, the mortality returns for typhoid are falsi-

fied by the inclusion of the milder fever. (2) A negative Widal, which often gives a false sense of relief to doctor, nurse and relatives, does not exclude paratyphoid, which is an infectious fever, and must be carefully managed in order to prevent spread of the infection, as in ordinary typhoid. (3) When the blood from a patient whose symptoms suggest a diagnosis of typhoid fever fails to agglutinate the Bacillus typhosus, further agglutination tests must be carried out, or the stools must be examined for the Bacillus paratyphosus, and allied organisms. (4) Closely as paratyphoid fever simulates typhoid fever, a careful consideration of the clinical history will, in a number of cases, justify a provisional diagnosis of paratyphoid fever being made even before the specific tests are applied to the blood. (5) Of special importance in the diagnosis is the occasional acute onset, characterized by pyrexia, vomiting and diarrhea, with severe pains in the head and back. Sore throat and herpes are frequently noted at an early date. These more acute symptoms may subside, but the pyrexia continues, and other signs and symytoms appear, which closely simulate typhoid fever, such as enlargement of the spleen, rash and abdominal distension. (6) Sometimes there is a transitory period of comparative improvement intervening between the first few days of acute discomfort and the rest of the illness. (7) The practical value of determining what organism is responsible for each case of gastro-intestinal infection is obvious, for when the organism is known the probable source of infection can, with some likelihood, be surmised, whether it be beef, pork, or a human carrier. A series of cases of anomaious typhoid sheuld at once suggest the necessity for a careful examination of the blood or stools.

Pathologically High Blood Pressure, with Some Considerations for its Treatment by Non-Medicinal Methods.—Hudson (The London Practitioner) makes no pretense of advising that the treatment of high blood pressure should not include the use of drugs but emphasizes the desirability of using other and general measures in connection therewith.

In the acute crises, those in which of course we must always use such depressor agents as the nitrates and thyroid extract, much may be accomplished by the wet pack. When this is used there is a preliminary slight rise with later an elimination of toxic matter and a rapid lowering of the pressure. The pack should be about 70° Fah., left on for several hours and may be repeated if necessary. Under this treatment the convulsions of uræmia quickly subside and the patient is tided over what would have otherwise been a fatal crisis.

The more routine cases, such as we see in our offices, may be dealt with in a variety of ways. One of these ways is rest, physiological rest as a direct outcome of physical rest. With high blood pressure and especially if any grave complication threatens, rest in a recumbent position for several hours a day is imperative. During this period general massage and passive exercises may be employed, increasing in amount and activity as the case improves, each case being studied and treated individually. The patient's daily routine should be mapped out and he should be under constant supervision. In many cases the electric light bath proves valuable, stimulating the surface circulation and increasing metabolism. In bringing blood to the small capillaries, not only is the pressure lowered but lungs, skin and other organs are stimulated. Another electro-therapeutic measure of value is auto-condensation by means of the D'Arsonval high frequency current, the patient being for the time being part of an electrical condenser. The effect is a general lowering of pressure with an equalization of the circulation. In these cases the resultant increase of comfort to the patient is remarkable. In many cases the oxygen bath proves very helpful, the brisk evolution of the oxygen relieving heart and pulse markedly through the lowered pressure. This is a sedative measure and is especially useful in arteriosclerosis, cardiac neurosis, tachycardia, etc., and should be used in organic disease, provided there is adequate compensation. The various forms of massage fulfill almost every physical indication, and of these forms the methods known as the Swedish medical gymnastics comes first with vibratory massage next, the latter being far more effectual than manual massage.

The diet should be one of limited protein value, not only simple but simply prepared, fats and carbohydrates should be kept at the lowest possible point, the quantity being restricted in many cases rather than the quality and each diet should be suited to the individual case.

Where digestive disturbances are present it is surprising how much benefit attends the use of the lactic acid ferment. The plentiful use of mineral waters of a saline character while at first and temporarily raising the pressure, are eliminated by skin, bowels and kidneys, abstracting water from the tissues and at the same time permanently lowering the tension.

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essentials if good results are desired.

Mal Perforans Treated with Zinc Perhydrol.

A severe trophic ulceration of the foot, secondary to a thrombophlebitis in a very stout patient, advanced in years, was treated by Mueller as follows: The wound was cleansed daily with hydrogen peroxide, diluted with twice the amount of water. By means of a spray, zinc perhydrol was then dusted upon the raw surface; finally, petrolatum, containing 10 per cent. bismuth subgallate was applied. The necrotic tissue very soon separated and the disagreeable odor disappeared and the secretion was checked almost entirely. The formation of granulations was slow and it required fully two months before the wound was entirely closed.—Deutsch. med. Woch.

Salvarsan in Cerebro-Spinal Syphilis.

Excellent results were obtained with salvarsan by J. Donath in the various syphilitic affections of the central nervous system. Thus, in lues cerebri there is improvement or disappearance of facial paralysis, and the paralyses of leutic hemiplegia (in 66 per cent. of the cases). The contractures disappear and the convulsions are soon checked. Writing and general muscular power will again approach the normal and the subjective sensations of pain and the paresthesiæ will be alleviated. In ten cases the psychic condition became normal, and in two there was considerable improvement. In cerebro-spinal lues, the gait was restored in 25 per cent. and there was decided improvement in the bladder and sexual functions. The general condition was usually influenced to a marked degree. In the initial stages of tabes, the patellar reflexes may return and the ataxia. Romberg's symptom, gastric crises, lancinating pains and other pains may disappear entirely. In dementia paralytica, in the beginning stages, the pupillary reaction returned in 3 out of 28 cases and the tendon reflexes in one case. In 4 cases the gait was improved and in 11 cases the speech became more distinct. In a fair percentage, memory and the general intelligence returned, while in three cases the patients could again return to their vocation. Mercury and potassium iodide should be used in combination with the salvarsan and in paretic dementia, it is of advantage also to employ injections of the sodium salt of nucleinic acid.—Muench. med. Woch.

Treatment of Acute Tonsillitis.

Harold Hays recommends the following treatment for acute tonsillitis: After having sprayed the throat with an alkaline antiseptic, in order to clear away the mucus, he proceeds to spray the throat with a one per cent. solution of cocain and adrenalin 1:5000, applied especially in the tonsillar region. Finally the tonsils are touched with pure cocain. In a few moments the crypts are opened with a crayon of silver nitrate 50 per cent., the caustic being retained in each crypt from ten to fifteen seconds. The patient is recommended to rest the following day and take a light diet, using pulverizations in the throat of a 50 per cent. solution of hydrogen peroxide; at the same time to suck ice and to maintain a compress of cracked ice around the neck. Usually the tonsillitis clears up within 24 hours, although it may be necessary to repeat the treatment in some cases.—Medical Times.

Trachoma.

W. H. Harrison, of Lame Deer, Mont., describes his experience and the treatment used among the Indians west of the Mississippi, who are sorely afflicted with trachoma. He does not find it influenced by geographical or climatic conditions and in his observation it is always a chronic affection. Of course, trachoma is best treated by prophylactic measures; hence all public towels and washbasins should be done away with in schools, almshouses, prisons, factories, etc. The surgical treatment is comprised mainly in expression, which he thinks benefits more by the increased and quickened blood- and lymph-supply it induces than by the small quantity of trachoma material removed. He finds hot applications after expression more grateful and useful than cold ones and a drop of 25 per cent. solution of argyrol or some bland oil may be put in the eye and the glued lids which are found every morning should be carefully cleansed. When this has ceased the medical treatment begins and should be kept up until the whole conjunctiva becomes normal. This may take months or years and in complicated cases the destructive effects may be permanent. After the acute effects of expression subside, in from five to seven days, and there is no further secretion, inflammation or gluing of the lids, they should be everted and the whole of the conjunctiva of the fornix and palpebral surfaces firmly and rather rapidly rubbed with a smooth pencil of copper sulphate, and this must be repeated daily to secure the best results, taking care to prevent any traumatisms of the corneal epithelium. "Assuming that the true principle of the treatment of trachoma is often-repeated acute hyperemia in all the conjunctiva in which there is active trachoma, the copper

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stick should come in contact daily with all this surface." If thorough expression has been done properly and all secretions checked before using the copper sulphate the pain of the application will be gradually lessened and cease, but will appear again if, after having been left off, it is begun again. Copper sulphate should not be used when there is a corneal ulcer, an inflammation, iritis or acute exacerbation, until these have been allayed by proper treatment. Lotions are not indicated and the copper stick should not be used too vigorously or beyond producing the desired therapeutic hyperemia. If a bluish-white pellicle is produced by too caustic action it should be discontinued for a few days. Ointments and lotions are not, in Harrison's opinion, as effective as the copper stick.—Journal A. M. A.

Treatment of Pain in Laryngeal Tuberculosis.

Where pain is a pronounced symptom in tuberculosis of the larynx, V. Hinsberg recommends that alcohol be injected into the trunk of the superior laryngeal nerve. The author states that two of the best drugs for local application are orthoform and anesthesin. It is not necessary that the physician apply the powder or that a special apparatus be used, for an excellent anesthesia will be obtained if 5 or 6 grains be placed upon the tongue and swallowed dry. The powder will then lodge where ulcerations most commonly occur, that is, about the epiglottis and the arytenoids. The after-effects are purely local and very slight and no taste is imparted to the food. These patients can be made very comfortable in this way and do not seem to become accustomed to the drugs. A good effect was also seen in tonsillitis or quinsy throat.--Muench. med. Woch.

Zinc Perhydrol in Wounds and Ulcers.

Many drugs do excellent service in venereal and leg ulcers but the majority are objectional for some reason or other. Iodoform frequently gives rise to a severe dermatitis and its odor is so strong that the patients are generally obliged to remain at

home. Many of the substitutes of iodoform are very expensive and much less efficient. E. Brodfield has tested zinc perhydrol, a white, tasteless and odorless powder consisting of zinc oxide and dioxide. The powder was applied chiefly to soft chancres, incised buboes and ulcers of the leg. In infected ulcers the healing process was no more rapid than with iodoform but clean ulcers closed in a remarkably short time. It is therefore best to first cauterize the infected ulcers with pure carbolic acid and then to apply the powder fresh daily. Dermatitis never occurs and buboes only rarely appear with this treatment. In buboes the secretion is very soon reduced and healthy granulation tissue is formed in a surprisingly short time. The powder is here dusted into the cavity and the wound then covered with sterile gauze. In ulcers of the leg, a cure is not so rapid owing to the disturbance of circulation yet, as a rule, the wounds close after 6 to 8 weeks.—Klin.-therap. Woch.

The Cutaneous Reaction to Tuberculin in Childhood.—La Page (British Journal of Children's Diseases) says that the reaction to tuberculin is specific, and it is a broad rule that all cases infected with tuberculosis give a reaction.

The subcutaneous method gives the highest percentage of results, but for practical purposes the cutaneous method is the most suitable.

Human tuberculin should be used because bovine tuberculin does not give reactions in all cases.

The substances used to dilute the tuberculin do not in themselves cause a reaction in the strengths they are now used.

The nature of the reaction is not yet proved.

The results of the clinical examination and the tuberculin test are confirmatory of one another, the reaction occurring far more frequently in those showing symptoms pointing to tuberculous infection.

The x-ray examination and the cutaneous tuberculin test correspond fairly closely if their results are properly interpreted.

A reaction indicates that the subject has been infected with tuberculosis and does not mean that the disease is progressive or even active.

We have at present no method of performing the test to afford us a means of distinguishing between active and passive disease, but research may find such a method.

A marked reaction or a reaction in a healthy person may be of good import and need not bear a sinister interpretation.

Slight reactions seem to occur more often in cases negatlve or only possible clinically.

A negative result may follow the test in children infected with tuberculosis: (1) if the disease is advanced; (2) if there is cachexia; (3) in very acute disease; (4) in mixed infections or cases complicated by acute disease.

A single negative test does not exclude tuberculous infection, repetition of the test increasing the percentage of positive results considerably (28 per cent).

Even a negative result on repetition of the test does not always exclude infection, because some cases are only positive on the third application, and others, positive to x-ray examination, but neither advanced nor cachectic in nature, do not react to repeated tests. Therefore, judged by the x-ray examination, the cutaneous tuberculin test cannot be regarded as absolutely reliable in excluding tuberculous infection.

In some cases the first test may stir up powers which have not given a reaction at the first test, but which produce a reaction at the second test.

With the exceptions noted above, and excluding faulty technique, a negative result to the test applied twice can for all practical purposes be held to mean that there has been no infection with tuberculosis.

There is greater difficulty in diagnosing occult tuberculosis after the age of two years. In indicating tuberculous illness the test is of greatest value in young children.

As judged by the cutaneous test on children attending at a hospital, tuberculous infection occurs in 32 per cent. up to the age of two years, in 51.2 per cent. from two to five years, in 60 per cent. from five to ten years, and in 60.8 per cent. from ten to fourteen years. Even in cases negative to clinical examination, infection occurs in 14.7 per cent. up to the age of two years, in 31.4 per cent. aged from two to five years, in 30.7 per cent. aged from five to ten years, and in 51.2 per cent. aged from ten to fourteen years. In other words, tuberculous infection is common in early life, increases rapidly in frequency up to the age of ten years, and then increases steadily but less rapidly, until at the end of school age at least 60 per cent. of children have become infected. Even in cases negative to clinical examination about 50 per cent. have become infected.

Albuminuria, Pathological and Physiological, with Reference to Life Assurance.

Finckh, in a paper read before the New South Wales Branch of the British Medical Association, says that in cases of appar-

ently healthy individuals who show albumin in the urine, we are in the habit of safeguarding ourselves by the use of such terms as physiological albuminuria, functional albuminuria, and transitory albuminuria. By using one or other of the above terms we intend to indicate that, although albumin is present, there is no definite pathological derangement, and therefore the condition of the individual is not necessarily a grave one. The question thus arises as to the exact meaning of the above terms, and the advisability of employing them. The term physiological albuminuria is evidently based upon the fact that so many text books mention that a minute quantity of albumin is normally present in urine. When we consider that protein of any sort can be found in normal urine only to the extent of about .002 per cent., an amount so small that our usual laboratory methods do not even detect it, we must, for all practical purposes, consider that normal urine does not contain even a trace of albumin. He thinks therefore that it would be better to discard the term physiological albuminuria altogether in this connection.

The term functional albuminuria is perhaps a better one, but also has its objections. In medicine the word function is usually employed as opposed to organic; it is used to indicate that the sign or symptom to which it is applied is not due to any organic lesion. When dealing with urine, the above meaning of the word brings us at once into difficulties, for even in so grave a condition as granular contracted kidney, where the pathological changes are pronounced, it is possible to find a total absence of albumin. Therefore, one must be guarded in employing this term. The third term, transitory or transient albuminuria, seems to be the only one that should be employed in insurance work. It means nothing beyond the fact that the urine occasionally contains albumin, and it is left entirely to the clinician to put the proper construction upon such finding.

Albuminuria should always be looked upon as pathological; its causation is due to some abnormal condition of some organ or some system. It should not be forgotten that the albumin found in a urine may possibly be due to the presence therein of blood or pus of purely urethral origin, or of vaginal or prostatic secretions. Also albuminuria in any febrile condition, as typhoid fever or pneumonia, would not be taken into account when concerned with life insurance work.

When the amount of albumin in a urine is comparatively large, there is no difficulty in detecting it, but when the amount is small, perhaps minute, one does not always feel confident as to the reliability of the ordinary methods of testing. The two methods that may be easily employed in one's daily work, and yet are of an exactness which meets the requirements of large chemical pathological laboratories, are the old established test of boiling and Heller's test.

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will bring a special container with samples for office use.

Exactness must be employed in the performance of these tests. Thus in the boiling test the urine must be first rendered perfectly clear by filtering. Urine containing bacteria will not filter clear, as the organisms pass through the ordinary filter, but in such cases examination would be deferred. The urine must be only faintly acid. If necessary a 25 per cent. dilution of nitric acid must be added. If the urine is very acid it should be diluted with a saturated solution of sodiumchloride. Acetic acid must not be used on account of the possible formation of acid albumin which is not precipitated by boiling. Take 10 c.c. of such clear acid urine and boil; after boiling add 10 or 20 drops of 25 per cent. nitric acid, or two or three drops of 25 per cent. acetic acid. Do not boil again, since in the case of nitric acid having been added, partial solution of the albumin will occur. The precipitate must appear at once, on boiling otherwise it is not albumin. Niiric acid should be preferred, as even a small excess of acetic acid will redissolve some of the albumin; again, if mucin be present acetic acid will not dissolve it, whereas nitric acid does.

For accurate work the above quantities and dilutions must be strictly adhered to. For purposes of comparison, two test tubes of equal amount of the clear urine should be used; one treated as above, the other used as a control. Certain drugs, such as turpentine, copaiba, and sandalwood, cause a similar cloudiness; but if alcohol be added, on cooling of the urine this cloudiness will disappear if it is not due to albumin.

The next test, that of Heller, is performed as follows: Place 5 c.c. of concentrated nitric acid in a test tube; add carefully, without mixing, an equal amount of the filtered urine. A distinct white disc will appear at the junction if albumin is present. It is necessary to wait about three minutes before a negative result can be read off, since the formation of the disc may be retarded if the quantity present is very small. No other precipitate will appear in the shape of the above mentioned disc; any cloudiness due to other substances appears some distance from the junction of the two fluids, leaving no possible doubt if the test has been performed with neatness.

We have thus two very simple methods that give us all the information required, and it is always best, in doubtful cases, to perform them side by side. There is no necessity to resort to the more modern and more complicated methods, as greater accuracy than that given by the above two tests is never required in practice, and they at least have no pitfalls.—Australian Medical Gazette.

Bsnzol in Leukemia.

Since several cases of hemorrhagic purpura and severe aplastic anemia have occurred in factories where benzol was employed, Prof. A. v. Koranyi has considered it worth while to try the effects of this substance in leukemia. He finds that after a slight temporary increase in the number of the white cells there will be a steady decrease by the end of the second or beginning of the third week. The number of the red cells remains constant or increases slightly. These results are obtained in all cases of chronic leukemia. Later, the spleen will become smaller, but the lymphatic glands are not so readily influenced. The effect is generally less rapid than that obtained with the Roentgen rays though the drug is often of value where the rays no longer cause any change in the condition. The best results are obtained with the drug where the rays have already been employed. The doses employed are 3 to 5 grams daily. After-effects, such as burning in the stomach, eructations, tracheo-bronchitis and vertigo are common. As a rule, the stomach will tolerate the drug better if it is given in capsules with an equal amount of oil. Good results were also seen in one case of polycythemia with splenic tumor.—Berl. klin. Woch.

Treatment oi Tape Worm.

Mendelsohn states that Filmaron is a safer and more efficient drug to drive off tape worm than the popular preparations of male fern. Filmaron is a 10 per cent. solution of the active principle of filix mas, called aspidinofilicin, in castor oil. The patients should eat only sparingly on the day before treatment, and in the evening may be allowed some herring salad with onion. In the morning of the following day, the filmaron is given on an empty stomach. Adults usually receive 10 grams, corresponding to one gram of the active principle, while for children 5.0 to 7.5 Gm. are generally sufficient. If necessary, adults may take as much as 15 Gm. If the bowels do not respond one hour after the drug has been taken a teaspoonful of castor oil should be given; this may be repeated, if necessary, in another one to two hours. Vomiting never occurred and in 11 out of 12 cases the head of the worm was passed. All the cases reported in literature have been tabulated by the author; head was passed and the patient remained free from recurrence in 80 per cent. It is probable that the drug is effective also in infection with other worms, such as ankylostomum, ascaris, bothriocephalus, etc.—Berl. klin. Woch.

Fellows' Syrup of Hypophosphites

Its distinctive characteristics are:

Uniformity of Composition,

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Stability in vacuo,

The property of retaining strychnine in solution for an indefinite period, and

Pre-eminence in arresting disease.

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Scopolamine in Morphine Habit.

Fromme first reduces the dose of morphine to a minimum, then uses scopolamine hydrobromide by injection so as to keep the patient asleep until all the morphine is neutralized and excreted. The duration of the narcosis depends upon the amount of morphine that the patient has been taking; thus in some cases it may be advisable to continue the narcosis for seven to eight days. The patient should be kept in a darkened room and on a liquid diet. Morphinists usually tolerate scopolamine very well. Evil after-effects have never been seen by the author.—Berl. klin. Woch.

Treatment of Tuberculous Peritonitis.

Philibert recommends cod liver oil in the treatment of tuberculous peritonitis, provided the oil is tolerated well. When poorly borne, it is well to begin with a very small dose and gradually increase until 5 or 6 tablespoonfuls are taken every morning. When constipation is present, the oil is especially indicated, but in periods of diarrhea, tannin combined with iodine in a syrup is partieularly indicated. If the tannin mixture is not well borne, tincture of iodine should be given with milk, or the following solution may be administered by hypodermic injection:

Iodi	.25 Gm.
Potassii Iodidi	2.50 Gm.
Guaiacolis	1.25 Gm.
Glycerini (puræ neutralis)	25. Gm.

Cc. .25, gradually increased to one Cc., is to be injected daily.

Calcium phosphate is another useful form of medication and is antagonistic to both sweating and diarrhea and may be administered either in cachets in the form of glycero-phosphate or in solution as monocalcium phosphate. The cacodylates and Fowler's or Pearson's solutions are effective in sluggish afrebile forms of the disease, but they are contraindicated when fever and diarrhea are present.—Progres Medical.

Multiple Lupus Vulgaris Following Measles.

MacLeod reports the case of a child who had had measles two years previously, and in the convalescent stages of fever an eruption of reddish-brown spots had appeared, which, when first noticed, were about the size of a split-pea and were situated on both arms. These lesions had gradually grown, until at present they varied in size from a sixpence to a florin. They were confined to the arms, there being nine on one arm and ten on the other. The lesions were of the lupus type only; they had been considerably inflamed by some irritating ointment which had been applied, and several of them had become impetiginized. The child was one of a family of twelve, and there was no history of tuberculosis among them, nor, as far as could be gathered, in the antecedents. A physical examination of the child failed to reveal any other stigmata of tuberculosis. Cases of this kind were by no means uncommon. They suggested the possibility that they were the result of an embolic shower of tubercle bacilli, emanating from some broken down focus of tuberculosis, such as a mesenteric or bronchial gland, which had reached the cutaneous capillaries and there prodaced the tuberculous lesions.—Proceedings of the Royal Society of Medicine.

Mechanical Treatment of Skin Diseases.

—Schiff (Wien med. Woch.) says the great advance made in the treatment of skin diseases during the last twenty years, first by the light of Finsen, then with the X-rays and radium, and later by massage and by the studies of Bier on hyperemia. As pointed out by Unna, the effects of treatment can be observed experimentally on the skin at once with certainty, and this applies not only to the chemical remedies which he used, but also to various mechanical means. so that more rapid progress has been poissble in the therapeutics of skin diseases than in any other branch of healing. The author contrasts with primitive apparatus the modern application of heat and cold to the tissues, instancing the diathermic method, in which by means of a high tension current heat can be originated in the tissues themselves. As other triumphs of electrical treatment he mentions its use by Shoemaker, Winkler and Ehermann, to promote absorption, to check inflammation and congestive erythema, to kill parasites, and to allay tenderness and irritation in such conditions as anal fissure, cracked nipples, burns and herpes zoster. The value of the Roentgen rays, he says, is established in the treatment of lupus, of mycosis fungoides, and of favus; in the removal of nevi, angiomata and keloids, and possibly even of cancerous growths; and in the relief of hyperidrosis and hypertrichosis. Radium emanations have proved useful in slow healing ulceration due to tubercle, syphilis,or other causes;in Aleppo boil; and in excessive pigmentation. The use of massage has been extended by Jacquet with good results to the relief of all forms of pruritus, of eczema. seborrhea rosacca, and even of the most severe forms of pruritus, of eczema, seborrhea, rosacea, and even of the most severe forms of acne. In opposition to the teaching of Hebra,

who forbade the use of water in many skin diseases, Lassar has proved the great value of hydrotherapy in over 10,000 cases of eczema, particularly in the bullous and moist forms; and continuous both have been used with success in pemphigus, psoriasis. ichthyosis lichen ruber, pityriasis, rubra, and in extensive burns. Apart from the effect of water itself sublimate baths in syphilis, calcium sulphide baths in scabies and hot Japanese bath in leprosy afford examples of special balneotherapy. Hot air has been shown by Hollander to be valuable in the treatment of lupus and of primary syphilides; and the results of Bier's congestive treatment of diabetic skin diseases and of local bacterial inflammations are well known. In conclusion, the author considers the mechanical treatment is the of yesterday. The discriminating physician of today will use each in its place; but to attain success with the mechanical treatment the practitioner must possess, not only a knowledge of disease, but also a practical acquaintance with the technical details of every form of apparatus he would use.

Two Cases of Colloid Tumor of the Third Ventricle Causing Death.

The first patient was found uncounscious on the street, and on admission to the hospital the left pupil was larger than the right and the knee-jerks absent. The temperature, 98.7° on admission, rose to 105.4° before death a few hours later. The atopsy showed the presence of a round, semi-translucent tumor, lying in the anterior part of the third ventricle. It was about the size of a small marble, and attached by a fibrous band to the right choroid plexus.

The second case, an unmarried woman, age 18, had suffered from nocturnal enuresis from childhood. Six months before death she commenced to suffer from headache. She was found dead in bed following an exacerbating of her headache. A tumor similar in size and position to that present in the first case, was found at autopsy.

The histological examination in the two cases showed a fibrous outer capsule coveiing a layer of eithelial cells. The center was composed of hyalin material. with degenerated epitelial cells. Five similar cases had been previously reported.—Van Wert

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in New Orleans Medical and Surgical Journal.

Air Embolism,

Kleinschmidt has found experimentally that the pulmonary capillaries are not concerned in the right ventricle. When the air is removed all the threatening symptoms disappear. He has also found that in certain positions of the body, that is elevation of the legs, the dangerous symptoms from air embolism may be materially diminised Meisel has also found that 4 ccm. of air is a fatal dose, and when the animal was placed horizontally it bacame breathless, but when raised vertically the dangerous symptoms immediately disappeared. The same experience occurred in a patient where this dangerous accident had happened. Zentralbl, f. Gyn.

New Uses for Fibrolysin.

The veterinarian Reichenbach was consulted for lameness in a valuable horse. Careful examination disclosed the presence of a thrombus in one femoral artery. A bad prognosis was given, yet it was decided to inject 10 Cc. of fibrolysin solution intravenously. To the great surprise of the physician, the lameness improved almost at once. After eight days, hardly any lameness was apparent and a second injection of the same amount completely cured the animal. (Berl. tier. Woch., 1912, No. 13.) An interesting case of chronic pneumonia in a child seven years of age is reported by W. Stoeltzner. After the acute process had run its course, dullness and bronchial breathing persisted; the child continued to run evening temperatures and steadily lost in weight. The case seemed hopeless until fibrolysin was employed. The contents of 10 ampoules were injected subcutaneously between the shoulder blades within three weeks with the remarkable result that the dullness, bronchial breathing and the scoliosis diseappeared completely. The temperature in the evening very soon returned to normal and there was a steady gain in weight, so that the child could soon be discharged as cured. The author recommends that for children the single dose should not be less than half a vial. It may be injected subcutaneously or intramuscularly or directly into the veins. For certain cases, the plaster or suppositories are indicated.—Deutsch. med. Woch.

Treatment of Tetanus.

Tetanus antitoxin is effective in the lully developed disease provided a sufficiently large dose is injected (at least 8 units per kilogram body-weight) and the treatment is persisted in long enough. A. Wiedemann believes there is very little danger of anaphylactic symptoms after repeated doses, but in individuals with very sensitive vaso-motor-system, the anaphylactic test may be employed. (0 1Cc. horse serum is injected intracutaneously when a local reaction occurs in one day, instead of 5 to 7 days.) In the first days during the incubation of the serum disease calcium chloride may also be given internally. In one case 1125 units of antitoxin were used, contained in 187 Cc. horse serum. The serum disease here showed itself on the ninth day after the first injection, after about 167 Cc. of serum. In another case observed by the author, a temporary improvement in the form of cessation of the spasms was noticed after the injections of serum of a patient with a cured tetanus. Unfortunately, no more of this serum could be obtained so that the cure was completed satisfactorily with the antitoxin. —Muench. med. Woch.

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GEORGE BEN JOHNSTON M. D. A. MURAT WILLIS, M. D.

Appendicitis.

I met a friend of mine, who asked me, "Vot is become of your brother Isy?" I told him. I vas sorry he asked me, I told him he is deat." He asked, "Is he deat for vat?" I said. "He vas sick for four monts in our back parlor. Ve didn't know vat vas de trouble, and ve sent for de board of healdth und dey gife em an examination und dey brought in a verdict dat hes got "a pen on de seatus," so I asked the doctor ven he can cure him, und he say, "Ve got to put him in de hospital und make an operation on him." und dey took mine brudder in a hospital und gife him a cut from the stomach to de back, and dey couldent find a "pen on de seatus" at all, all dey found vas an absince, und dey sewed him up again mit cord und he died, den dey put him in a box mit a label on de outside, "opened by mistake."

Vaccine Treatment of Acne.—Galbraith, in the London Practitioner, gives the following conclusions in regard to the vaccine reatment of acne:

The acne bacillus is the cause of acne in all its stages.

The staphylococcus is a surface contamination, and at the most can only aggravate existing pustulation.

Doses of 5 to 10 millions do not suffice to cure, unless one is prepared to go on indefinitely. The doses required range from 30 to 100 millions, according to the type of the disease.

The duration of treatment extends from three to five months in the milder cases, from six to twelve months in the severe forms.

As there is a close relation between the opsonic index and the amount of pustulation, the latter may be taken as the guide to dosage and frequency of administration.

Whilst it is impossible to give anything like a definite prognosis, it may be said that marked improvement is brought about in the great majority of cases and a fair proportion cured, and that it is a striking advance on the older methods of treatment. The mild comedo and superficial pustular types are most amenable to treatment, next the pure comedo type, and last the deep indurated type.

The author states that he has not found an autogenous vaccine give better results than a stock vaccine.

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Saline Infusion.

The various inconveniences of saline infusion by the usual routes, namely, injection into the subcutaneous tissue, rectum, abdominal cavity or into a vein, impelled Schoute to seek a better technic for routine use in general practice. By the technics in vogue absorption is slow and the procedure painful, but these drawbacks are avoided by injecting the solution directly into the prevesical space, the triangular interval occupied by more or less fatty tissue, known as the pubovesical space of Retzius. By pushing the needle along the rear wall of the symphysis it enters the space in question without fail, and the fluid runs out of the needle into this space so freely that a liter can be thus infused in less than ten minutes. The tissue here is so loose that the fluid finds its way in without effort and thus the procedure is free from pain. This need not cause surprise as we know that this prevesical space serves only as a reserve space for the bladder to stretch into as it fills. The patients feel sometimes a little pressure on the bladder when the saline solution fills the space of Retzius, but the sensation is never enough to complain of. An area of dulness shows where the salt solution lies; a few hours later not a trace of it can be detected by auscultation or palpation. He has applied this method in a large number of cases and has never noted any by-effects or complications. Even if the bladder or peritoneum should happen to be pierced by the needle this would do no harm. He found the procedure extremely useful and harmless in a case of compound fracture of the pelvis and severe peritonitis in a child who had been run over by a wagon. Schoute injected the salt solution in this way for several days, until the constant vomiting could be controlled. The special advantages of this technic are thus the lack of pain or discomfort, the rapidity of the infusion and absorption, the simplicity of the procedure, and the fact the fluid never seeps out again.—Zentralblatt fur Chirurgie.

Dr. Addison G. Brenizer, of Charlotte, N. C., and Miss Mary Richmond Harding were married at Davidson College, N. C., April 9th, 1913. Dr. Brenizer is a surgeon of considerable prominence. He graduated at Johns Hopkins University Baltimore, Maryland, 1908; later he studied in Heidleberg, Vienna and Paris.

Camphorated Oil in Surgical Operations.

Lampe uses a 2 per cent. camphorated oil, warmed and sterilized during operations and just before closing the wound, tissues are flooded with the oil and the excess removed with mops. No toxic effect has been observed even in large wounds, and primary union was the usual result. The author has also successfully tried to sterilize the field of operation with camphorated oil, and has found that it has the advantage over iodine tincture, in that the intestines are not injured by the oil, while contact with iodine generally causes the formation of adhesions. Another author has used camphorated oil in suppurating wounds and has found that such wounds rapidly become clean.—Zentralbl. f. Gyn.

Dr. James W. Squires, of Charlotte, N. C., was married to Miss Runice Viola Jeffries in Charlotte, N. C., April 9th, 1613. Dr. Squires graduated at the North Carolina Medical College in 1911, and since that time he has spent a great deal of time in Northern Colleges and Hospitals. He is a young man of considerable professional prominence, and is very popular with the medical profession of this section of the country.

Dr. Thomas Smith and Miss Daisy Holcomb, of Dillon, S. C., were married March 27th, 1913.

Mitral Stenosis: Peripheral Emboli Causing Partial Monoplegia, with Symptoms Simulating Cerebral Embolism.—Alderson (British Medical Journal). A short record of a case of a woman, aged 42, who developed mitral disease after an attack of rheumatic fever six years previously. Eighteen days before admission to the hospital, while stooping suddenly, she felt sick and giddy, and the left forearm and hand fell powerless to the side. A second embolus, affecting the lower limb, occurred three days later. She again felt sick and giddy, and simultaneously "lost power" in the left leg and foot. She was sent to the hospital as a case of cerebral embolism, when it was found that the left radial pulse was absent, and that pulsation was absent from some of the main arteries of the foot. Four days after admission she died suddenly.

At the necropsy no cerebral lesions could be found to account for the loss of power in the limbs. The upper part of the left brachial artery was blocked by a reddish-grey clot of recent formation, and another thrombus was found filling the lower half of the left femoral and the whole of the popliteal arteries below. A large ante-mortem clot, 2½ inches long, was found in the right auricle.

Salvarsan in Syphilis of Central Nervous System.

There is still considerable difference of opinion as to the effect of Ehrlich's drug in syphilitic and metasyphilitic affections of the central nervous system. Kliemeberger has had exceptional opportunity to treat and study these cases, and in an interesting article concludes as follows: General paralysis is not affected by salvarsan to the slightest degree, but in tabes good results are sometimes seen. In some cases of paralysis it is even probable that the drug does harm. The results obtained in syphilis of the central nervous system are very good and in general correspond to those obtained with the older methods of treatment, though there are many obvious advantages. The author has several cases of tabes and of syphilis of the central nervous system on record where a combination of salvarsan with mercury did more good than either drug alone. He has therefore made it his rule to use both drugs in these cases.—Berl. klin. Woch.

Dr. Walter E. Walker, announces his removal from Graham, to Burlington, North Carolina, April the 7th, 1913.

Treatment of Diabetic Carbuncle.

A typical diabetic carbuncle, treated by Heddaeus, rapidly increased in size after excision of the central core and radial incisions so that the patient seemed threatened with pyemia. The process was finally checked by incising completely around the carbuncle down to the muscle at a distance of one cm. from the edge of the focus. In order to destroy the germs in the newly opened lymph spaces, tincture of iodine was applied freely and the wound was then treated with gauze saturated with 2% solution of collargol. At the same time, the patient received several intravenous injections of 5 Cc. 2 per cent. collargol solution. The process did not spread any further and the entire necrotic mass soon separated. The process was considerably hastened by the injection of a 4 per cent. solution into the tissues.—Muench. med. Woch.

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The Main Building Front View.

The following directions are suggested for the benefit of those who may forward material for examination.

All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.

Seventh Street Entrance.

The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test. — After carefully washing, prick the lobule of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and allowed to dry without being spread out on the suface of the slide. After they have dried, the

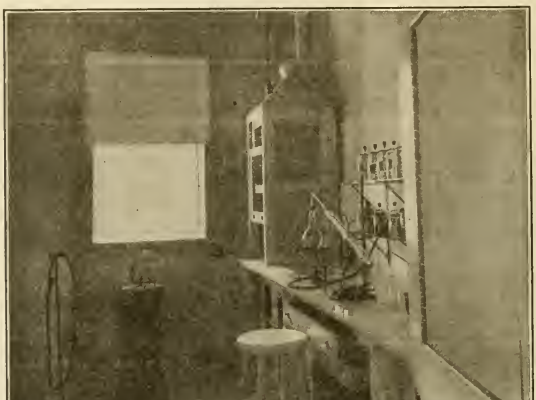
slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

Second Method.—Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count. etc., should be sent to the labaratory on glass slides. As thin a smear as possible should be made.

Clinical Laboratory, Showing Arrangement of Desks, Miscroscopes Microtomes, Incubator, Centrifuge, Etc

Smears For The Detection of Gonococci.—One drop ofpurnlent discharge from the urethra should be placed at one end of a clean slide and a thin smear made overthe surface of the slide.

In collecting a specimenf rom a female patient,care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a sterile swab or other instrument. Two smears should always be sent to the laboratory.



Clinical Laboratory, Showing Autoclave, Hood, Operating Tables, Etc.

Urine.—for bacteriological examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15-20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlic 's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological—material from either operation orautopsy should be wrapped in gauze moistened with salt solution surrounded by oiledpaper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and thematerial from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They should rest upon a pad of absorbent cotton, which is placed in thebottom of the jar before

the tumoris dropped in.

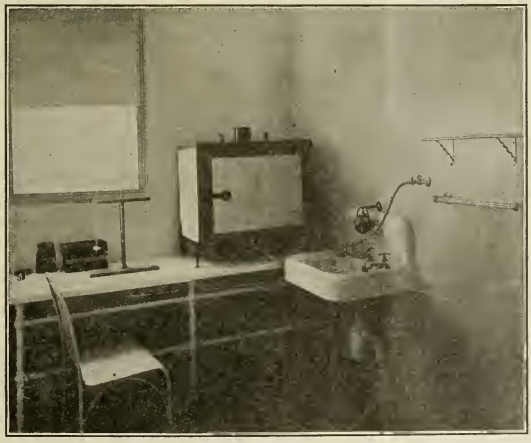
Feces.—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

Wassermann's Test.—Since the advent of the discovery of 606 for the cure of Syphilis. the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.

(Clinical Laboratory, Showing Supplies, Working Table. Etc.)

Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourinquet applied, taken the blood from the vein by means of the syringe.



Clinical Laboratory, With Hot Air Sterilizer, Scales, Lavatory, Etc.

2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourinquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohollam , or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tue, allow to coagulate, cork, pack and mail as any other fraigle package. Atleast two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk.—The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents.—should be sentin a sterilized bottle. Alarge vaseline or quinine bottle usually answers the purpose.

Fig 1.

Fig 11.

The following table gives the cost of many of the examinations made in this laboratory:

Smears and Stains (tubercle bacillus,) gonococci, etc. $1.00

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Complete analysis3 00

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Microscopical ... 1.00
Complete analysis 1 50

Pathological Sections......5 00

Feces Examination 2 00
Blood Culture ... 5.00
Cultures and isolation of bacteria..... 5.00
Stomach Contents2.00
Widal Test..... 2.50
Tissue Sections.. 5.00
Tuberculin Test 5.00
Wassermann's Test 10.00

Milk.

Chemical 2.50
Bacterial 5:00
Water analysis, bacterial examination.. 5.00
Chemical examination including alkalinity, chlorides, ammonia, nitrites and nitrates ...5.00
Quantitative analysis ..... $10.00 to 25.00
Culture Media (per tube) ..... .25
Sterilized tubes and pipettes ..... .15
Coagulation time 2.50
Vaccines..... 10.00
Sterilized Tubes with swab .....50 Bacterial Cultures 1.00 Sterilized solution.. 5.00 Spinal Puncture and Analysis 5.00

Address all specimen to the Charlotte Sanatorium Laboratory, Charlotte, N. C

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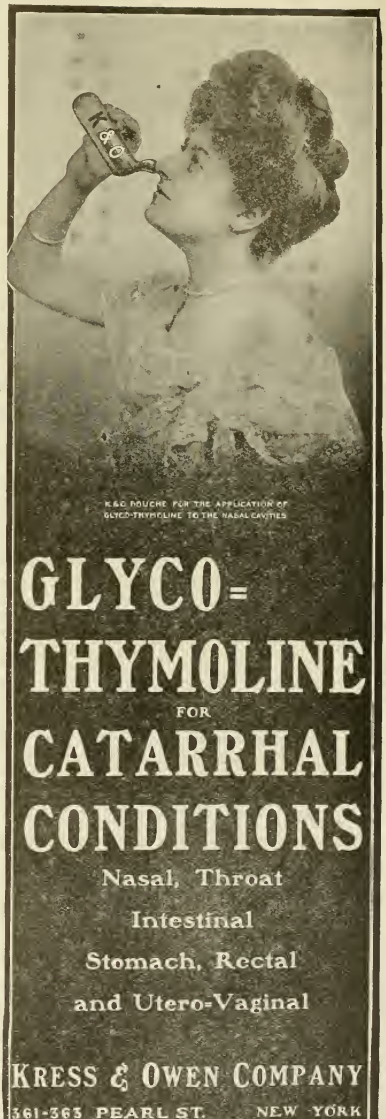

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When the Fire Came to Van Horn and Sawtell.

Some one has said that no one knows the stuff a man is made of while things are running smoothly and nothing is annoying him; one must see him face to face with emergencies, disasters and trouble to get a true idea of his actual worth and capacity. Firms are like men. It takes a calamity to show the system, organization and kind of men back of them. The recent fire that did $25,000 or more damage to Van Horn & Sawtell's well known establishment at 307 Madison Ave., exemplified the above very conclusively. Although the pharmacy or retail department on the ground floor—which has been repeatedly spoken of as one of the plainest and yet most beautiful drug stores in New York City—was severely damaged and put quite out of commission, a striking example was given of what system and good management can accomplish under the gragest difficulties. In spite of the destruction of the pharmacy and the essential confusion that followed, no interruption was allowed in the daily preparation of the fresh U. S. P. infusion of specially imported digitalis (assayed) leaves, a servivce that has long been been one of the conspicuous features of a unique prescription department. The medical men who have come to reply on obtaining every day of the year a fresh infusion of digitalis were therefore never called upon to forego a single day's supply—a record of efficient service in the face of difficulty that will stand unchallenged for many a day. Incidentally the hospitals receiving gratuitiously the unused portion of each day's infusion were likewise served without interruption.

Another gratifying condition was the fact that owing to the laboratory and manufacturing departments being in another building, wholesale deliveries and shipments were not interferred with in any way, but continued with their customary precision and despatch.

Van Horn and Sawtell are to be congratulated on having an organization and system that when confronted by a disaster so completely suspending the activities of one of the most important departments can yet maintain the balance of so large a business at its full efficiency.

Restoration of the retail or pharmaceutical department has progressed rapidly and by the time this reaches our readers the Van-Horn and Sawtell Pharmacy—"the Shop Singular"—will be again serving its many fastidious and discriminating patrons with the same painstaking care and integrity that have over characterized its dealings and been the real foundation of its success. —From American Medicine.

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The healing of suppurating wounds may be expedited in a marked degree by the use of ECTHOL (Battle). In addition to a germicidal influence it adds to cellular resistance, as a result of which the luxuriant germ growth becomes inhibited, until finally the purulent process becomes reduced to the point where the tide toward healthy granulation. Where such wounds are of more than ordinary size or severity, the internal administration of ECTHOL has proven a most useful adjunct to the local treatment.

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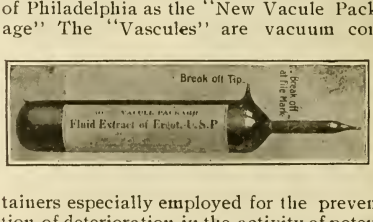
A novel package is now being extensively advertised by the H. K. Mulford Company of Philadelphia as the "New Vacule Package" The "Vascules" are vacuum containers especially employed for the prevention of deterioration in the activity of potent drugs ospecially Digitalis, Ergot and Strophanthus. Careful investigations show that many preparations undergo changes,



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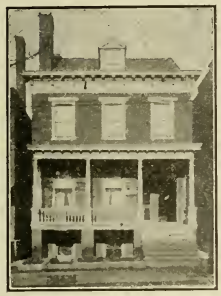

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even when kept in tightly corked bottles, which result in a great loss of activity and thus render them unreliable as therapeutic agents. Only recently was it discovered, as the result of a series of experiments conducted in the Mulford Research Laboratories, that the changes to which the deterioration in these preparations is due, are caused primarily by the action of oxygen of the air which is held in solution in the liquid.

Further investigatious show that with complete exhaustion and exclusion of air from the container and its contents, practical permanency may be secured, and in accordance with this, the H. K. Mulford Company have placed upon the market standardized preparations of Ergot, Digitalis and Strophanthus in "Vacules" (Ampuls), which differ from ordinary "sealed ampules" in that all the air is removed from the liquid contained in the Vacules, which ensures permanency to the product.

Riedel, of the Charlottenburg Hospital, Berlin, in writing on melubrin as an antipyretic and an antineuralgic. (Ther. der Gegenwart, May 1912), characterises melubrin as an efficient antipyretic in pneumonia and endocarditis. Riedel's clinical experiences with melubrin revealed no collapse- exanthematas, or profuse perspiration, such as follow the use of salicylates.

Muller, of the Deaconness Hospital, Halle, (Wisen. Klin. Woch. 1912, No. 25) especially recommends melubrin as an antipyretic in acute and chronic polyarthritis and in pneumonia and sciatica.

"In the treatment of shock xxxx cease all painful manipulation. Use novocain locally to block all sensory impulses, if possible." J. C. Bloodgood, Progressive Medicine, Dec. 1912.

Mesengill Bros. Co., Bristol. Tenn., advertise in this issue their Creo-Derma, which is an external application for eczema and other obstinate skin diseases, and which has a large sale in the Southern States. Several of their customers have written that they have had marked results with Creo-Derma in their cases of Pellagra and this firm is anxious that mothers give it a trial and will mail a free sample.

This is one of the few successful firms of pharmaceutical manufacturers in the South they having established 15 years.

Lubricating Jelly.

Lilly's Lubricating Jelly is a most valuable addition to the list of remedies and articles which the physician and surgeon must have in his office and hand cases. It is at once available and convenient for lubricating specula itc., before they are introduced. But more gratifying perhaps is the use of the jelly as a lubricant for the fingers of the hand employed in making a vaginal or rectal examination. Both the physician and patient are protected from infection.

The jelly is fat free, water soluble, slippery and sterile. Hands and instruments are readily cleaned when they have been coated with it.

There are other uses to which Lilly's Lubricating Jelly may be advantageously subjected. Antiseptics and frequent scrubbing of the hands are likely to produce a determatitis. The Jelly should be used to soothe the skin and prevent irritation. Certain skin diseases such as pruritus may be greatly mitigated by the application of the jelly. It is soothing and healing and can be used with much benefit in the eruptive fevers in which there are itching and irritation of the skin. Further information can be had by addressing the Manufacturers, Eli Lilly & Company Indianapolis.

The Elimination of Opium's Untoward Phenomena.

Were it not for its several disagreeable features which are sufficiently weighty to make one hesitate before employing it opium, of course, would be the ideal analgestic. Unfortunately, however, along with its analgesic effects, opium experts those well known phenomena which tend to limit its usefulness as a pain-relieving agent.

But with the discovery of processes by which it is possible to eliminate the convulsive and narcotic principles of the drug, PAPINE (Battle) became possible, and with a wider therapeutic application than opium.

In the manufacture of PAPINE, the several objectionable qualities of opium have been elminated, the finished product representing the alalgesic and sedative properties only of this valuable drug.

In view of this, the superiority of PAPINE over opium and its alkaloids cannot be denied, for although offering to the patient the positive analgesic properties of opium it does not at the same time bind up his bowels or subject him to its other disagreeable effects. The utmost care is taken in the manufacture of PAPINE and it is fully believed that it offers every possible advantage over opium.

The Charlotte Medical Journal

VOL. LXVII CHARLOTTE, N. C., MAY, 1913. No. 5

Fever Tick Pest.

By Robt. C. Campbell, M.D., Shreveport, La.

The cattle fever tick, as it directly and indirectly effects the human being, is a serious and important study, requiring a rigid investigation.

I believe the Dermacentor Occidentalis Boophilus Annulatus and Margaropus Annulatus are the same tick although found in different sections. This notorious parasite has within the past 40 years spread over a wide territory, from Texas to California —over the Ozarks to the Northwest, down through Louisiana and Mississippi to Florida. A more pernicious, wide spreading, disease bearing pest cannot be found —infecting both cattle and human beings.

Many thousands of fine cattle have been infected and died from tick infection within the past 20 years. Human beings have also suffered severely from the bite of this poisonous parasite. Up to the present investigation we find the tick family similar to the mosquito family—some apparently are innocent of infecting or conveying diseases to human beings or cattle. Avoid the bite or sting of all insects, as we do not have time to investigate their innocent or poisonous character. During the past six or seven years there has been some investigation as to the poisonous effect of the Cattle Fever Tick on human beings and it has been demonstrated without a doubt that the bite of a Fever Tick will produce a severe type of remittent fever and in some cases causing death. Aboat 10 years ago my attention was called to this infectious parasite. A message came for me to visit the owner of a dairy farm. I found him suffering with a severe chill, frequent vomiting, severe pain in head and limbs, chill about two hours duration, temperature rose to 104 4-5, had fever continuously for two days, temperature ranged from 103 to 104½. He had frequent relapses during the following six weeks. Very weak and sallow. My last prescription was Phosphate of Iron and Ess. Carlisayer which soon built him up to his former condition. This case was so peculiar I made an investigation of premises. House and barn in good condition, water good, no mosquitoes, found the pasture badly infested with fever ticks. I learned that several fine yearlings and two-year-old heifers had died with tick fever and that others were sick. I found that this man had been frequently bitten by ticks, consequently after my investigation I decided that his illness was principally caused by tick infection. I saw several similar cases that season after which time my practice was confined to the city. I passed the summers of 1909 and 1910 in the Ozark mountains of Arkansas, where I had an opportunity of fully confirming my former diagnosis of tick infection. I found the Ozarks badly infested with the cattle fever tick and saw several undoubted cases of remittent tick fever during my stay there. My son, age 5½ years, was one of the victims. He went in a woods pasture to gather wild flowers, next day I removed two ticks from his body. His temperature for 48 hours ranged from 103 to 104½. It was two months before he fully regained his former good health. In tick infested sections I am convinced that there are many cases pronounced billious remittent, typhoid malarial and remittent fevers that were unqualified tick remittent fever, caused by tick infection only.

Treatment.—Give a gentle cathartic. Do not use calomel, as it is liable to produce unpleasant bowel trouble. If liver is very torpid give from ¼ to ⅓ grain leptandrin and podophyllin, combined with ½ to 1 grain extract hyoscyamus and ⅙ to ¼ grain extract nux vomica; when the temperature falls to 90° F. commence giving ferrocyanide of quinine; give from 2 to 3 grains (according to age) every three hours until 3 or 4 doses are given, then give every 5 or 6 hours for three days, after which time give iron and calisayer for a month. I prefer phosphate of iron and essence calisayer. Treat fever stage according to age and condition of patient—use a mild febrifuge.

Charles F. Kieffer, M.D., Major and Surgeon in the United States Army, gives a lengthy report of the tick fever as it effected the United States soldiers at Fort D. A. Russell, Wyoming. This valuable paper was published in the April, 1907, No. of the Journal of the American Medical Association. I have been patiently waiting for reports on tick infection, but it seems that Major Kieffer and myself are the only ones who have made a special and careful study of this serious disease—one which has caused the deaths of many persons and loss of thousands of dollars in deaths of cattle. The eradication of the tick pest from a health and financial point of view is one of the most important measures the government has to contend with. Those who handle cattle cannot realize the grave danger they incur in regard to their health and

financial loss. I trust the time will soon come when this pernicious pest will be exterminated, and it can be done. The fever ticks were brought to north-west Louisiana on cattle driven from Texas to Shreveport to be shipped down Red River. Some herds were kept in pastures and fattened before shipping. Since 1880 the ticks have become very troublesome, and in the past 12 or 14 years there has been considerable loss in cattle, and all of the dairy farms in the vicinity of Shreveport are infested with ticks. Cattle after recovering from the fever do not seem to perfectly regain the same conditton they were in before the infection. Milk cows do not come up to the standard of quantity and richness of milk. Milk from cows infected should not be used for any purpose. All cows giving milk should not be allowed to graze in infected pastures. Watch the cows carefully—pick or scrape off all the ticks to be found on them and use for the herd the following emulsion of crude petroleum recommended by the U. S. Department of Agriculture, Farmers Bulletin 498:

FORMULA.

Hard soap	One pound
Soft water	One gallon
Crude petroleum	Five gallons

Shave up the soap fine, place in a kettle containing the required amount of water—the water should be brought to a boil and stirred until the soap is entirely dissolved—then add the petroleum; thoroughly mix and stir until emulsified. The mixing may be effected more promptly by the use of the spray pump, pumping the mixture through until the emulsion is formed. Spray the herd frequently, using the spray pump. Look closely after the pastures if timbered. Cut out all undergrowth brush and briars and burn them. Remove all dead wood and burn over the pastures in the fall as soon as the trees shed their leaves. Open pastures will not be tick infested unless there are patches of brush and briars in them, which should be immediately removed and kept clear.

These suggestions are for small herds only. for the treatment of large herds I would advise consultation with the Department of Agriculture, Washington, D. C.

Surgical Aids as Rendered by the Modern Cystoscope.

By A. B. Knowlton, M.D., Surgeon Knowlton Hospital, Columbia, S. C.

The subject to which I invite your attention, is one to which I have given considerable time and labor during the past eight years. At an early day it became evident to me that if I desired to be in any degree proficient in the recognition of the diseases of the bladder, ureters and kidneys, I would have to look to the cystoscope as a constant and ever attendant companion in the prosecution of my investigations. Of this little instrument, with its wonderful system of minute lenses and diaphragms, it might truly be said that it "holds the mirror up to nature, as 'twere," and brings within the field of actual vision conditions, which, till within the last few years, were matters only of conjecture, but which now are within the ken of all who will but look. There are questions relative to the bladder, ureters and kidneys which must be answered, and must be answered correctly. How can this be done without the aid of some means that will put us in touch with conditions as they actually exist?

The microscope tells us of pus, blood, families of infectious micro-organisms and disintegrated tissues which come down the urinary tract, but is mute as to their definite source. Frequent urination, burning, bearing-down, tenesmus, the languid eye, hectic, paroxysms of diabolical agony and emaciation all tell of the profound involvement of something, but do not say positively of what. These are all silent as to whether the kidneys ureters or bladder are involved. If the kidney, they fail to say which kidney. If the ureter, they do not say which ureter, nor which portion of the ureter, nor whether there is a hydro- or pyo-ureter, or a hydro- or pyo-nephrosis above a possible obstructed point. In fact, they tell *nothing*, except that *something* is wrong, and *something* needs to be done.

It is not sufficient in the present day to make the announcement that a man has "kidney trouble," or "bladder trouble," or that the ureters may be involved in some way. Nor is it always sufficient to administer urotropin and lithia water. We must get down to business and settle definitely, once and for all, the questions: Has the man a calculus? If so, is it in the right or left kidney? Or in the right or left ureter? Or in what portion of the ureter? Or is it in the bladder? If there is a calculus in the ureter, is it obstructing the flow? If there is a tubercular infection, is it in the right or left kidney, or is it in both kidneys? Or is it in the bladder only? Is there a neoplasm of the bladder, what is its nature and extent? Is it in the fundus, from which position it may be easily and safely removed, or is it in the trigone or in the interureteric space, from which points the operation is much more difficult, and where the condition is sometimes inoperable? If the kidney involvement is of such a nature as to demand its removal, will the patient still

have a healthy kidney left, or not?

These are questions which crowd upon the brain for positive and definite answer. These are questions which, if answered clearly and lucidly, make plain the conduct of the case, but which, if left unsettled, throttle the course of action.

Through the perfection of the cystoscope the answering of these questions has been made possible; so possible, indeed, that their solution is but a matter of daily routine.

How can we declare the existence or absence of the ball-valve so frequently formed by the middle lobe of the prostate, producing as it does the most perfect form of mechanical obstruction to the urinary flow that human ingenuity or pathological process could possibly devise or effect, unless we can see it. In such a condition the prostate may feel to be normal in size, the urethra may be entirely devoid of stricture and the entering sound may detect no form of obstruction, and yet it is absolutely impossible for the patient to void a drop of his urine. These cases constituted the "pons asinorum" of the urinary surgeon till the cystoscope revealed the true cause of retention.

Mr. W. S. T., 48 years old, came into hospital with a history of gradually increasing urinary obstruction from which he suffered more or less for two years. His history showed a complete absence of any genito-urinary infection and of syphilis. It had been necessary for him to call in a physician a number of times to give him relief by catheterization. He suffered as much from his attacks of retention in the summer months as he did in the winter. He had no stricture—any sound up to a No. 26 French being passed with facility and without pain. Rectal examination with or without a sound in the urethra showed a normal sized prostate. There was no dribbling of urine whatever, the retention being as positive and complete as it is possible for such a condition to be, and yet the patient could be catheterized with facility either with a silver or a soft rubber catheter. The cystoscope showed a projection of the middle lobe of the prostate into the bladder which acted like a perfect ball-valve in shutting off the flow of urine. Operation was done by the suprapubic route and the ball-valve removed, giving immediate and permanent relief.

It is a well recognized fact that whenever an organ is the seat of an infectious process, its mouth or stoma presents an irritated, congested, dilated and pouting appearance—the nostrils thus declare the existence of an infective coryza, the appearance of the pudendum thus suggests an infective vaginitis, the condition of the anus makes known the dysentary above, and the pouting meatus proclaims the infected urethra. This law is not less true relative to the upper urinary tract, the inflamed, dilated and pouting condition of the orifice of the ureter making known the infected state of the kidney above. The cystoscopist therefore soon learns the value of the inflamed and pouting ureteral stoma and makes many a diagnosis thereby.

The use of the cystoscope and ureteral catheter in both unilateral and bilateral pyelitis is now a recognized necessity, in either its diagnosis or its treatment. It is not sufficient to know that there is pus in the urine, but it must be known definitely whether the pus comes from the bladder or kidneys, and if from the kidneys, whether it comes from the right or left kidney, or whether it comes from both kidneys. It must be known whether the nature of the infection is the same in both kidneys; for instance, it would be necessary to know if one kidney had a tubercular infection and the other a colon bacillus infection. If the pyelitis does not respond to treatment reasonably soon, the pelvis of the kidney may have to be irrigated with one of the silver preparations such as argyrol or collargol.

Mrs. D. W., was referred to me for daily chills, fever sweats, and pus in the urine. She had been sick for some two weeks and had been kept thoroughly cinchonized. Cystoscopic examination showed the left ureteral orifice thoroughly reddened, congested and pouting, and with purulent urine escaping therefrom. The diagnosis of pyelitis was made. The pelvis of the left kidney was irrigated through the ureteral catheter with normal saline solution. This was done two days in succession, after which a single irrigation of half an ounce of a 2% solution of argyrol was deposited in the pelvis of the kidney and allowed to remain there. Patient had only one more chill, fever and sweat after the first irrigation. Returned home on the fourth day after entering hospital and made a rapid recovery. No plasmodia were ever found in the blood.

Every abdominal surgeon knows the value of the ureteral catheter or of the metallic stylet when passed into the ureter and left there to guide him as to his proximity to the ureter in all extensive dissections in the pelvic cavity, such as are frequently being done at the present day for carcinoma uteri. The danger of injuring one or both of the ureters in any such dissection is only too well recognized by any one who has ever attempted the procedure, and this danger can be positively obviated only by the presence of such stylet in the ureters during the operation.

There is a condition in which, in my service, the cystoscope has been particularly useful, viz.: in chronic gonorrhoeal cystitis. In a number of these cases the patients (all of whom have been women) have been taught how to irrigate the bladder and have practiced it once or twice a day for a period of from six (6) months to three (3) years. In these cases the cystitis had been completely cured, but the constant and careless use of the catheter in the act of irrigation had produced an ulcer on the posterior wall of the bladder just opposite the urethra which maintained the intolerable bladder irritation and hypogastric pain. I know of no condition so easily diagnosed by the cystoscope as this, as the natural direction of the urethra guides the lens of the cystoscope as unerringly to the seat of the ulcer as it did the catheter in producing the abrasion. In addition, its treatment is the simplest of all bladder conditions—the ulcer, being mechanically produced and maintained, will heal immediately upon the discontinuance of the irrigations.

Mrs. L., of Columbia, had been treated for two years for chronic cystitis and had been taught to irrigate her bladder with a soft rubber catheter. This she did twice every day. In addition, she had had every other treatment which held out any promise of benefit whatever. When she came to me her symptoms were so typical of chronic cystitis that I treated her for two weeks for this condition. Obtaining no benefit, I made a cystoscopic examination and found an ugly ulcer, about the size of a quarter of a dollar, on the posterior wall of the bladder, exactly opposite the internal urethral orifice. I observed that the cystoscope passed into the urethra would, when unrestrained, pass directly to the center of the ulcer. I argued from this that the ulcer had been produced and was perpetuated by the end of the soft rubber catheter used for so long a time in intravesical irrigation. I put the woman in bed, therefore, and discontinued all treatment and all irrigation and she made a complete recovery in two (2) weeks. It has now been three (3) years since dismissal and she has had no recurrence of symptoms.

Again, I have found the cystoscope of practical value in those cases in which the symptoms were referred directly to the bladder but in which the cause of the suffering was entirely *external* to the urinary tract, such as adhesions between the omentum and bladder, or appendix and bladder, or fallopian tube and bladder. In all of these cases the cystoscope and ureteral catheter and stylet have shown the urinary tract to be normal, and in this way have directed attention to the abdominal cavity when celiotomy invariably revealed the true cause of the symptoms.

Mrs. W. H. J., from North Carolina, consulted me for pain in bladder whenever an effort to stand in erect position was made, or whenever she straightened her body and limbs while lying in bed. The pain was limited absolutely to the hypogastric region, and for this reason the bladder was suspected, although there was no pain upon urination and no evidence of cystitis.

Cystoscopic examination was made, and although the finding was negative, it demonstrated clearly that at least the interior of the bladder was not involved—the cystoscope was at least useful in this way. Exploratory incision was advised. The great omentum was found very adherent to the bladder, resulting evidently from a previous attack of pelvic cellulitis. The adhesions were broken up and the lower four inches of the omentum amputated to avoid readhesion. As soon as the patient awoke from the anæsthetic she straightened out her limbs and body in bed and announced that her trouble had been relieved.

The every day practicability of the metallic stylet and cystoscope in establishing the positive location of ureteral calculi is a truth well demonstrated. The Roentgen ray ofttimes renders most valuable assistance, but there are cases which cannot be diagnosticated by the X-ray alone,—for instance, it is a common occurrence with the X-ray to find small calcified glands or phleboliths in the pelvic cavity which give the appearance of calculi in the ureters. If, however, the ureteral stylet is first placed in the ureter and the picture *then* taken, ureteral calculi will appear as beads strung along the line of the stylet, whereas glands or phleboliths are irregularly placed some distance away from the stylet. Again, the wax tipped stylet will render aid in diagnosing ureteral calculi by the fact that the calculus when touched by the stylet will leave marks or scratches upon its wax tip which could not be produced by anything in the ureter but a calculus.

Mrs. R. D. came to my hospital in May, 1912, with chills, fever, sweats, and pain and swelling in the right lumbar region. The patient had had a kidney drainage done six months previous by an eminent New York surgeon for pyo-nephrosis and had made apparently a good recovery. Leucocyte count showed 1400. Urinary examination showed pus, while cystoscopy and ureteral catheterization showed normal urine from the left ureter and purulent urine from the right. The ureteral catheter or stylet could be passed into the right ureter

only about one inch when it met with obstruction. It was evident that some urine was escaping down the ureter, although the catheter could not be passed upward. X-ray showed a large calculus, larger than the thumb-nail, low down in the right ureter, apparently about an inch from the bladder. On account of the very low position of the calculus it was evident that it would be impossible to remove it through a lateral or extraperitoneal incision. I therefore opened the abdomen through a supra-pubic median incision. The ureter, extending from the site of the calculus to the kidney above, was distended to the size of a man's wrist, presumably with pus. After walling the intestines back with gauze, the posterior peritoneum was incised and the ureter opened just above the site of the stone. The pelvic cavity was at once filled with extremely offensive pus from the ureter. This was mopped out, the stone was extracted, retrograde ureteral catheterization done to make sure that this canal was patent below the site of the stone, the ureter and post-peritoneum were sutured separately and the pelvis drained through the supra-pubic wound. Four days later it was found necessary to make an opening in the vault of the vagina to relieve the pelvis of pus that had accumulated. The ureter healed by first intention and the drainage wound closed in three weeks. The patient is perfectly restored and is now studying music in Paris. It is evident that the New York surgeon entirely overlooked the true pathology back of the condition, as he did not use either the cystoscope or the X-ray in establishing his diagnosis. It strikes me that this case should impress upon us the extreme rationality of a thorough investigation of every inch of the ureteral tract in all cases of retention in the kidney pelvis.

Again, the cystoscope renders aid in enabling the examiner to see ureteral calculi impacted in the ureteral orifice and projecting into the cavity of the bladder.

Mrs. L. C.; I was about to operate upon her for a cystic ovary and chronic appendicitis when she asked if the operation would cure her of the pain she had whenever she urinated. As she had not previously mentioned this symptom I postponed the operation and instead made a cystoscopic examination under ether. A small calculus was found projecting from the orifice of the right ureter into the bladder. Attempt was made to remove it through the bladder but without success. Three days later the operation was done through the pelvis when the ovary and appendix were removed and the stone pushed into the bladder by doing a high ureterostomy and retrograde passage of a blunted ureteral catheter (the catheter was made blunt by simply cutting its end off square). The patient recovered and, I am informed, is now in good health.

Positively the only means we have by which neoplasms on the interior of the bladder wall can be diagnosticated, is by means of the cystoscope. The X ray, of course, is powerless to assist us, as these growths are too small and non-fibrous to offer any resistance whatever to the X-ray. The cystoscope, on the contrary, declares their existence or non-existence, their number, location, size, and probably their nature.

Mrs. A. W. M., had been suffering from frequent, painful and bloody urination for eighteen (18) months when she came to see me in August, 1911. On account of the frequent and profuse hemorrhage it was extremely difficult to conduct an entirely satisfactory cystoscopic examination. By keeping the bladder flushed with saline solution during the examination and allowing the bloody fluid to escape continuously it was possible to distinguish a broad, flat, villous growth in the fundus of the bladder from which the hemorrhage came, and which was in all probability a papilloma. It was evident that to remove all of the growth, a large slice or section of the bladder would have to be sacrificed. Operation was done supra-pubically, the bladder opened laterally and held open bo guy sutures. An elliptical strip containing the growth about 1½ inches wide and about 3 inches long was removed, after which a catheter was sutured into an artificial vesico-vaginal fistula made for the purpose, and left in ten days while the bladder was healing. It will be found that on account of the natural intolerance of the urethra to permanent catheter drainage, that the artificial vesico-vaginal fistula affords an entirely satisfactory outlet by which to keep the bladder empty during the process of healing.

I might add here that I have opened the bladder over forty times for neo-plasms and have in nearly every instance adopted the vesico-vaginal route for drainage, finding it not only very comfortable to the patient but more effective as a drain. The same end is obtained in the male by the stab wound in the perineum. In both sexes the drainage opening heals rapidly upon removing the tube.

Again, the cystoscope is valuable in declaring positively *which* is the tubercular kidney or *which* is the calculus kidney, or *which* is the pyelo-nephritic kidney, in short, *which* is the kidney that needs to be removed or drained. Not only this, but the cystoscope establishes the fact of the existence of only *one* kidney, in which case. this one kidney should not be removed under any circumstances.

Mrs. L. C., had suffered from frequent urination for about a year when she came voluntarily to my hospital, in April, for examination. She had lost fifteen pounds in the six months immediately preceding her advent into the institution and was beginning to show some signs of hectic. She had quantities of pus in the catheterized urine, but there was nothing in her history, nor in ordinary physical examination to lead one to suspect one kidney more than the other. The patient was kept in hospital several days for observation and examination. She showed a daily afternoon rise in temperature of two degrees. Cystoscopic examination showed a pouting ureteral orifice on the right side which emitted cloudy urine. Uretheral catheterization showed normal urine from the left ureter and pus and tubercle bacilli from the right ureter. No X-ray picture was taken. Diagnosis: chronic tuberculosis of the right kidney. I am confident that without the assistance of the cystoscope and the bilateral ureteral catheterization that this diagnosis could not have been made. The right kidney and most of the right ureter were removed and followed by recovery.

The conception has become quite general that cystoscopy is quite a difficult proceedure, that it is much more difficult in the male than in the female, and that a totally different set of instruments is required for the proceedure in the two sexes. As a matter of fact, the operation is one of the simplest conceivable, especially when considered in connection with the value of the information thus obtained. Identically the same instruments are used for both sexes, and except for the question of urethral stricture, which is practically *never* to be considered in the female, cystoscopy and uretheral catheterization can be easily accomplished in five to ten minutes in any male subject. In addition, ten or twenty minutes are required for the collection of the urine which comes down from the kidneys drop by drop. There are, of course, cases in which, on account of infected urethra or bladder, neither the cystoscope nor the ureteral catheter should be passed. Again, there are instances in which the pain and tenesmus incident to the proceedure is so great that a general anæsthetic is necessary to make it possible. In all of these cases, however, except in the presence of infection of the lower portion of the tract, the greater the pain and suffering, the greater and more urgent the need of such a thorough investigation as will set at rest forever the question of its cause. Absolute asepsis is of course always imperative, and in no field of specialism is the necessity for "clean hands" more obligatory.

Up to the present time we have a record of over three hundred cases examined by the cystoscope, and in no department of our endeavor have the results been more gratifying. We hope at an early day to publish a classified report of our work done in this line.

Observations on Tumors, with Report of a Fatal Case of Melanotic Sarcoma.

By L. Sexton, B.S., M.D., New Orleans, La.

A tumor is the abnormal, non-typical formation of a mass of tissue in the body for no definite physiological purpose.

The malignant tumors are composed of new connective and epithelial tissue with no physiological function, usually terminating fatally unless successfully and entirely removed before metastasis has taken place.

The embryonal, or evolution theory of tumors is that the connective, epithelial and other cells become misplaced in embryonal life, afterward by irritation, and increased blood supply or infection, take on new growth in abnormal relation to other portions of the body.

The most reasonable explanation of the development by excessive growths of these misplaced epithelial and connective tissue cells is that they are misplaced fœtal residues of embryonic cells, disseminated among the normal tissue. The cause of their latter growth or development may be some local lesion which infect or bring them into activity, or some hereditary tendency, or lowered vitality common among malignant tumors, gives suspicion to their constitutional origin. In such cases some local injury, or irritation, or infection is necessary to start their development as the smoking of a pipe producing epithelioma of the lip, and inhaling producing cancer of the throat; cracked nipple as the beginning of scirrhus of the breast.

Many have thought that cancer is a parasitic infection, with psorosperms, and the majority of cancer research has been along the lines of germ infection as is the case in many other specific diseases.

Twenty per cent. of our patients are affected with tumors of some kind—warty, malignant or benign. The benign may become malignant in the process of degeneration or development, so all tumors should be looked upon with suspicion, and removed unless there is some very cogent reason for not interfering with them. Anatomically, tumors may be arranged as connective tissue, parablastoma—as fibroma and sarcoma; archiblastoma, specialized tissue, as epithelial, adenoma, myoma and neuroma. Sarcoma and carcinoma metastasizes

through the lymph and blood stream, infiltrating surrounding tissue, also through the portal circulation.

Malignant tumors break through the parent tissue, spreads by contiguity, also metastasizes through blood vessels and lymphatics. They may occur again after operation if not thoroughly removed; constitution is profoundly affected; the general health impaired, usually ending fatally.

Benign tumors do not usually break through tissue where they originate; are not carried by blood and lymphatic vessels; no recurrence if properly removed; no disturbance of general health; growth is usually slower.

Semi-malignant tumors usually take on the peculiar characteristics of each of the other classes.

All malignant tumors, sarcomata and carcinomata are composed of either connective or epithelial cells displaced and developed out of all normal relation. In other words, tissue gone mad. Benign tumors prove fatal only when their development and growth cause them to press upon some vital point, or to cause destruction by pressure, or degeneration into some malignant variety of tumor.

It has been observed by many operators for malignant disease that the recurrence of the trouble is much more likely after operation with the surgeon's knife than when the same operation is accomplished by the cautery knife. This is particularly true of vaginal hysterectomies for carcinoma of cervix uteri. Many cases of malignant disease recur in the scar tissue of the original wound. Some are grafted on to the primary incision at time of operation. So in operating upon malignant tissue, no more manipulation of the tumor than is actually necessary, as in this way the disease is spread in the lymphatics and blood vessels more than it is when less manipulation is done. Another safe precaution is to sere the stump or seat of such growths before and after they have been removed.

A case has been reported by the Mayos where carcinoma was grafted on to a colostomy by secretions from the original site of the cancer involvement. Many other such transferences have been reported by other surgeons. It would therefore seem a wise precaution to tie blood vessels before dividing them, wherever possible, to keep the operative field as clean as possible from cancer juices, debris, etc., from the cancerous mass and to sere all points with the actual cautery in order to guard against recurrence of the disease.

One of the most prolific ways by which malignant tumors are metastasized is through the manipulation or, really, massage of the tumor by different consultants, students and friends, thus causing the cancerous cells, or juice, to be disseminated through the lymphatics or blood vessels to adjancent tissue, or internal organs. Nothing can be definitely gained from these often and unnecesiarily repeated examinations except as to the adherence of the tumor to adjacent tissue or its possibility of entire removal. One examination should determine this fact, if possible. Repeated manipulation will drive the pathogenic substance into internal organs which makes the removal of the external tumor useless as a curative measure. Another reprehensible practice is the indiscriminate sections of such growths for specimen examinations. The better rule would be to remove the entire tumor whenever suspicion is so strong that a specimen for diagnostic purposes is required.

All surgeons with large experience with tumors know that many which begin as benign encapsulated growths may degenerate in time into malignant tumors, and as no patient is likely to be injured by the removal of an ordinary tumor, it would seem better to operate on all where acquiescence of the patient can be obtained. The mere opening up of blood vessels and lymphatics for the laboratory specimen may be the beginning of a metastasis in the location of the tumor which is beyond the reach of the surgeon's knife.

The separation or division between innocent and malignant tumors is not so apparent as originally thought to be. This has caused the name of semi-malignant to enter our classification into types of tumors which were at one time simple, gradually becoming malignant.

Benign tumors may at times disseminate, they seem to be actually contagious as in cases of warty excrescences around the privates and instances where a surgeon after removing papilloma immediately developed one under his own finger nail which he had used in removing the wart. So the conclusion is natural that benign and malignant tumors in their growth and development are exceedingly similar one to the other.

Many cancer research laboratories have assumed that malignant cancer is a disease of itself, hence the parasitic assumption as a cause of cancer. The theory that cancer is a disease by itself causes many simple tumors not to be operated upon when in reality the whole tumor family should fall under suspicion as to what they may develop into in the future and should be removed, as a rule, as soon as the conditions are proper, and the patient's consent is obtained.

Another corrolary following from this, is that in removing simple tumors we should strive to do it as thoroughly as if it were malignant, doing early rather than late operations, removing too much rather than too little tissue in doubtful cases.

R. J., age 24; never seriously sick in his life, family history negative as to syphilis, cancer or tuberculosis. From a small boy he had an irregular dark discoloration on top of the left foot, about one inch from small toe. Without any apparent cause or injury it commenced to pain him, to throb when the foot hung down. It never seemed to enlarge, nor did it ulcerate. On account of the pain and suspicion of melanotic cancer it was excised under cocain and apparently thoroughly removed without much hemorrhage or any great difficulty. The wound was mopped with phenol followed by applications of alcohol to neutralize the acid. For a time (few months) the foot seemed to pain less and to be better. After a while near the same point other dark spots began to appear, lancinating pain returned, and when the question of a Choparts amputation was suggested (but refused on account of the apparent smallness of the infected area) about six months after the first operation the lymphatic gland on the anterior aspect of the thigh enlarged to the size of a marble; he began to void albuminous, then bloody, dark urine, and to show grave constitutional symptoms in which other internal organs, in addition to the kidneys, seemed to be involved. This continued for three months before ending in death, one year from the time of removal of the discolored melanotic spots.

Thus ended the life of a splendid citizen at the early age of 24 years in a comparatively short time with a malignant disease. In another case, under similar circumstances, I would urge the amputation of the foot well above the diseased discoloration as a primary operation, as by this means I might have avoided the secondary invasion of the internal organs. A postmortem in this case could not be obtained, but the following notes of a postmortem are taken from a similar case reported by Dr. Oliver Pemberton of England:

"Fifteen blackish spots near congenital mole, the entire coverings of the brain were diffused with irregular dark shaped splotches, melanotic nodules throughout the lungs the size of a pea or cherry. The heart was also sprinkled with jet black spots, liver three times its normal size, studded with melanotic tubera from the size of a sand grain to a pigeon's egg. The tubera in consistence were about as firm as tallow, color deep black or brown, the spleen and kidney were similarly affected as the liver, as were also the mesenteric glands."

Conclusions.—These few desultory observations about an unsuccessful case of melanosis are suggested not for any scientific merit but to impress upon members of the Association the importance of being extraordinarily careful in operations of tumors, not to disseminate or spread the growth to the new incisions which we make by doing a slip-shod or careless operation. but on the contrary we should be as careful not to have the new wound infected by juices from cancerous masses as we are not to have the peritoneal cavity infected with pus in appendiceal operation. As surgeons we should remember that the line of demarkation between benign and malignant tumors is not as distinctly marked as we originally thought, therefore the incisions for removing tumors should be made wide of the margin of the tumor and it would be as thoroughly done as in malignant growths. Uselessness of operations for malignant tumors that have metastasized to internal organs is apparent to all and only bring discredit to surgery when such operations are performed with a quick return of the malignant growth.

If this simple paper gives a little serious though and reflection on these lines the object of the writer will be obtained.

The Dose of Camphor.

There is a tendency at present to give camphor in large doses either subcutaneously or intraperitoneally with the idea that the drug is absolutely harmless. Most authors are, however, of the opinion that 2.5 to 4.0 Gm. of the drug given at once may give rise to severe toxic symptoms. In the normal individual, it is likely that there is enough glycuronic acid present to unite with any excess, but this may not always be the case in disease. Whenever the amount of glycuronic acid is reduced experimentally in animals by fasting or by the inhalation of illuminating gas, even small doses of camphor will show a toxic effect, according to C. Happich. Great care is thsrefore necessary in giving camphor during starvation, in certain mental diseases, carcinomatosis, convalescence after typhoid and diabetes, and also in cardiac disease during decompensation, double pneumonia, illuminating gas poisoning and all conditions where insufficient glucose or oxygen is at hand to form glycuronic acid. In health, the maximum amount tolerated is about two to four Gm.—Muench. med. Woch.

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ETHER IN OBSTETRICS.

It has become the habit of most practitioners to regard chloroform as the only anæsthetic to be used in obstetrical cases. The convenience of chloroform as an anæsthetic agent, the rapidity and certainty of its action, and the remarkable immunity of parturients to any immediate ill-effects plead strongly in its favor. Doubtless the small bulk that it occupies, and the fact that obstetrical operating must so often be done at night and by artificial light, have something to do with its popularity. Nevertheless, the exclusive use of chloroform must now be regarded as the result of custom rather than of reflection. Experience and modern teaching combine to confirm this statement.'

It is the observation of every thoughtful accoucheur that the use of chloroform predisposes to postpartum hemorrhage, and while immediate death from chloroform is extremely rare in labor cases, it is to be feared that not a few cases of fatal hemorrhage have been due to its incautious or excessive use. In all cases complicated by hemorrhage there can be no doubt of the superior safety of ether. For example, in placenta previa ether is to be preferred, and the same statement is true of many cases of abortion, which are attended by severe or long continued bleeding.

Indeed, the inhalation of ether in small quantity has recently been advised(Bumm) as a stimulant in the acute anemia of postpartum hemorrhage, instead of the hypodermic injection of ether, a painful procedure.

We all remember the time when it was generally held that ether was contraindicated in eclampsia, but it has recently been conclusively shown that the prolonged administration of chloroform produces changes in the liver very similar to those present in eclampsia, and that its administration in that condition tends strongly toward a fatal termination.

Then, too, we have learned something recently about delayed chloroform poisoning. There can be no question that certain cases of death in the lying in period, previously attributed to toxemia or sepsis, were really due to this condition. Whitridge Williams advises that chloroform should not be given in operations lasting more than one half hour.

De Lee, of Chicago, who used chloroform for many years, had three deaths, one from delayed poisoning after normal labor, and two after eclampsia, and now uses ether except in rare instances. He quotes Littig (Jour. Amer. Med. Assoc., 1908, Vol. I, p. 394) as unqualifiedly condemning chloroform, after reporting sixty-three deaths from its use, of which five were in obstetrical cases. De Lee considers that the danger of explosion in using ether at night is much exaggerated, and gives as contraindications to the use of chloroform, *sepsis*, *nephritis*, *eclampsia*, *cardiac disease*, *goitre* and *uterine atony*.

All this does not mean that we are prepared to leave our old friend, the chloroform bottle, at home, but it does mean that he who follows the trend of modern teaching and puts in his bag a can of ether will be made more comfortable by the feeling of added security thus obtained. And what is more important, will better safeguard the interests of his patients.

DR. DAVID LIVINGSTONE.

One hundred years have now rolled by since that most justly famous of all explorers, David Livingstone, was born in the little Scottish town of Bantyre. It was through his untiring and ceaseless efforts that the great Continent of Africa was opened up to modern influence and civilization.

By his own statement, however, he firmly avers that his exploratory findings were only secondary to his evangelizing efforts, and well did he realize that the latter as appealing to the man spiritual were best arrived at through a very common-sense and natural means, to-wit: the power of healing the sick and the caring for the physical comfort of the down-trodden and oppressed. If there is one thing that the life of this great man stands for it is the realization that we must get the substructure solid first before we attempt to appeal to what is more noble *and beyond*.

In Livingstone's time a great and barbarous slave trade existed in Africa for the European coastal supply and it was through his great power and humanizing personality that this nefarious traffic was at first mitigated in degree before its gradual abatement and subsequent stoppage. His was a labor of love—a work accomplished singlehanded, amid manifold dangers from barbarious and ignorant blacks and in a land literally infested with wild beasts and poisonous reptiles. With very skimp encouragement from Britain as well, he toiled manfully on, in season and out, rain or shine,

winter and summer, and amid peoples of a different race, of a different tongue, of a different life and of an entirely different outlook in creed and belief.

Amidst all these handicaps and despite twenty-nine distinct attacks of fever and three personal encounters with lions and numerous attempts of covert outrage by war-like savages this noble member of our profession actually accomplished what has ever since been the marvel of astonished Christendom! And what may not we as discrete units in this noble profession of healing accomplish in our humble way against the manifest loose living of our day and generation? Are not our people in many respects hampered by a rather crass ignorance on things germane to a fuller and a better life? Our slave trade exists today as in Dr. Livingstone's time but the color has changed—it is now white instead of black. Can we not by a sedulous instruction to the credulous of our population bring about less human injustice? Can we help to minimize the number of specific still-born, the specific hydrocephalic or the specific idiotic? Can we not enveigh sanely against that drug—alcohol—which embrutes the imbiber and steals away his wits, thus adding another firebrand to society? Can we not sow the seeds of mutual consideration—the policy of "live and let live"—when we enter the sacred portals of intimate home life, and make this world a veritable paradise? Yes! These things we should and can do and a perusal of the life of this great doctor who has long since joined the silent majority will certainly aid us in our work.

"Consideration like an angel came,
And whipped the offending Adam out of him;
Leaving his body as a paradise,
To envelop and contain celestial spirits."

HYDROTHERAPY IN TYPHOID AND OTHER FEBRILE STATES.

Hydrotherapy has been practiced as a therapeutic agent in typhoid and other febrile conditions for many years now and increasingly so since the very radical hydrotherapeutic measures of the German physician, Brand, were first inaugurated.

I, myself, have seen very little good arise from its use, and this also applies to the markedly tempered tubbing of very modern practice. I sincerely think the prevailing practice is based on a misguided *raison d'etre*. In all feverish states, be the same due to typhoid, heat assault or many of the manifold toxic states incidental to a host of acquired morbific states it will be readily noticed, and even by a casual observer, that the great bodily area of skin surface has lost its power of perspiring. The patient is "hit" toxemically as well, and this is due of course to the very widespread effects of the albuminous degeneration on all the cellular structures. By cellular I *more* specifically refer to the active parenchymatous tissues in contradistinction to the fibrous tissues which are more or less solely "packing" and "supportive" in character. This toxemic state results from a vicious cycle in the case of a bacterial invasion. The tissue reacts to the organismal insult as evidenced by a febrile reaction, and this febrile reaction in turn causes a superadded gravidity. In heat assault the pyrexial state is induced by the radiant sun action *per se*, as is the toxemia as well. In all these states there is also present a high relative oliguria besides the lack of skin secretion.

And yet how many of us, as self-styled ministers of Nature, will go right ahead and proceed to out-Brand Br and in our fervent desire to "cool off" as quickly as possible our doubly unfortunate charge; whereas a little commonsense on our part might speedily bring about a rapid amelioration leading to a cure.

Now even the veriest tyro of a medical man knows that a chilling of the body surface is about the surest and quickest way to stop renal action that there is known. *In potentia* all cases of acute nephritis with urinary suppression and beginning uremia are brought about by a sudden *chilling exposure* when in a *run-down state*. We are also all aware that no one could ever induce diaphoresis by cold water sponging did he try 'til "the cows come home." Sweating is undoubtedly of primal importance too, as by this means the noxious toxins are eliminated in large measure—the skin here taking on a vicarious excrementitious function since the kidneys are more or less *hoss de combat!*

Now to induce diaphoresis I consider warm packs, hot baths, or in less severe cases hot foot baths with flowers of mustard added a most useful set of means to combat the fever. Too much sweating is of course injurious. If it is necessary in hyperpyrexia, however, sweat smartly and later do a normal salt solution enteroclysis with a high soft catheter injection. After marked diaphoresis there is bound to be a fall of temperature and a consequent improvement in the state of the patient. With an abstraction of bodily fluid we always have this fall—in a diseased state there may be cited the subnormal temperature in cholera after a profuse serous bowel evacuation. The volume of the circulation should always be watched in the treatment, however. After the warm applications the patient should be warmly placed in bed and allowed only a warm milk diet which best suits his digestive and renal capabilities.

IODINE AND IODIDES.

It is an evident fact that iodine and iodides have a wide range of action in many diseased conditions. Some patients are very susceptible to the action of iodine. The following is one way to make iodized calcium for 5 cents an ounce instead of 50 cents an ounce:

℞	Air slacked lime (pure white)	ʒi
	Iodine (resublimed)	pr. 65

Mix thoroughly in a glass mortar with pestle, place in glass stoppered bottle; in about three days it becomes dark brown and is ready to use.

Iodized lime is not a chemical but simply a mixture. Some claim that iodized lime is better tolerated by the stomach than any other preparation of iodine. In my personal experience I find that the syrup of hydriodic acid is better tolerated by the stomach than any other preparation of iodine. I have seen some patients that would not tolerate iodized lime. The syrup of hydriodic acid is also the most pleasant form of iodine to take. Iodized calcium is probably the best form of iodine in croup and in diseases of the respiratory organs needing iodine, especially in acute cases. Some claim that iodized lime has quicker action than any other preparation of iodine and it may do so. It will act quicker when given in hot water.

Iodized calcium is a stable article if kept in bottles. The syrup of hydriodic acid is not a very stable article. The tincture of iodine and the compound tincture each has its special use. The tincture and compound tincture are very similar, the former is not soluble in water while the latter is.

The following is a very good application in tonsilitis, thrash, etc., as well as a good internal remedy in tonsilitis, thrash, grippe, cold, etc.:

℞	Carbolic acid	ʒi
	Tinct. iodine	ʒii
	Gylcerine	ʒv

M. Sig.: Use locally when indicated for local use or 5 to 8 drops for internal use.

Some say that iodine and carbolic acid are antidotes, but most all the leading physicians mix them. The compound tincture of iodine is used as an injection in cases of gonorrhœa, 10 to 25 drops in an ounce of water.

Possibly potassium iodide is used more than any other preparation of the iodides. In syphilis potassium iodide is very often combined with the bichloride of mercury and given in the ascending doses. The following is a good alterative and antisyphilitic:

℞	Fld. ext. corydalis	ʒiv
	Fld. ext. stillingia	
	Fld. ext. alnus	
	Fld. ext. podyblyllum aa	ʒi
	Fld. ext. kalmia	ʒiii
	Potassium iodide	ʒiv
	Simple syrup qs ad	ʒxvj

Sig.: Dose, one teaspoonful after each meal and at bed time.

Decrease or increase the dose so as to keep the bowels acting well. Potassium iodide can be driven into the system with the galvanic current and is often useful when used this way.

HYPODERMIC MEDICATION FOR CONSTIPATION.

Both medicine and surgery stand sorely in need of a remedy which can be administered subcutaneously with ease and comfort to the patient and when so administered is a quick and reliable cathartic. Therapeutists and pharmacologists have for years been studying and experimenting with this aim in view. They have encountered many difficulties. Though most of the remedies herein discussed have serious drawbacks to their general use, nevertheless the subject is nearing a solution and continued study is advised. Some remedy we need, and it must exist, which will act on the intestinal tract, and on it only, with no untoward effects on the rest of the economy. Highly desirable is it that the hypodermic purgative be free from irritation at the point of puncture, and resultant abscess and necrosis. Such hypodermic cathartic must be readily soluble, preferably so in water, in order that it would not be necessary to inject a large quantity, while in others a slow action will be preferred. The conditions in which a hypodermic purgative is desirable are, marked gastro-intestinal irritability, children, insane or inebriate persons, or hysterical persons who may utterly refuse to take medicine by the mouth, in coma and in certain cases of chronic constipation and after certain operations. After abdominal operations we find a special field for hypodermic evacuants. The remedy can be introduced under the skin during anesthesia and a mild purgative effect of, for instance, Phenolopthalein will appear the next day and its mild action will continue for a number of days. In many instances it will dispense with the necessity of using any other purgative after the operation. This happy condition though not yet attained is nevertheless attainable, and may be surmised from reading further.

Atropine has been known to produce peristalsis when introduced under the skin. It has not met with much favor on account

of its other action on the other secretions of the body.

Digitalis, pilocarpine, physostigmine and muscarine produce a cathartic effect when introduced hypodermically in sufficient quantities, but the accompanying ill effects prevent their use for this purpose and in this manner.

Cathartic acid, the active principle of senna, has been used by Castle and Dudley. They injected this acid in kittens in gradually increasing doses. Two grains, hypodermically, were found to produce free catharsis in ten hours which continued for several days. The movements were first hard, then soft, then clay colored.

Colycinthine is regarded by Heller as the most suitable for hypodermic purgation. This like aloes and cathartic acid are all serviceable but highly irritant, and the reaction at the point of insertion is frequently severe. They are advisable in exceptional instances where the indications are imperative. Sloughing of the tissues may be expected to follow in many instances.

Castor and croton oil have been experimented with. Catharsis was so slow in following that its connection with the remedy was thought to be doubtful. Painful swellings occurred at the point of insertion.

Elaterine, according to Brunton, acts as a purgative only in the presence of bile. One-twentieth to 1-10 grain hypodermically on kittens produced stools within an hour.

Veratrum and Barium hypodermically act on the involuntary muscles but have no sedative action on the muscles of the intestine.

Editorial News Items.

Getting Well Because of the Patent Medicine, or in Spite of It?

Editorial by Clarence Poe in "The Progressive Farmer."

We have a letter from a good woman who objects to our denouncing the whole patent medicine business because her husband was sick, took a patent medicine, and soon got well, although a doctor had treated him before without apparent good results.

This is a good illustration of the argument on which the patent medicine fakers rest their claims. A man is sick. He took a patent medicine. Afterwards he got well. Consequently—they say—the patent medicine cured him; he got well because of the patent medicine.

On the contrary, he probably got well in spite of it.

Take this simple fact: A man usually gets sick ninety-nine times before he dies; that is to say, there are ninety-nine cases of sickness to one death. Even if no medicine or drugs of any kind were used, there would be ninety-nine times as many recoveries as deaths. Consequently the patent medicine fakers work on this theory; that with any given case of sickness there are ninety-nine chances in a hundred that the person will get well, and then that the patient will reason that because he took the medicine, the medicine cured him. We believe it was Dr. Charles W. Eliot, who said some time ago that the great American faliacy is the belief that because one thing happened after another thing, therefore the first caused the second. A man might as well say, "I had a very bad headache but read Prof. Massey's article on sweet potatoes and got well. Therefore, reading an article on sweet potatoes will cure the headache."

Keep this fact in mind: If a man is sick he usually gets well anyhow, unless nature is interfered with in its efforts to get straight again. If he uses a patent medicine, he will probably get well anyhow: but it will take more medical knowledge than the average man possesses to know whether he got well because of the patent medicine or in spite of it. The truth is that most of the nostrums are compounded so as to have very little effect one way or another, the presumption being that nature will effect a recovery anyhow and the medicine, as we have just said, will get the credit. Those patent medicines that do appear to give relief more or less quickly usually contain morphine or whisky or some habit-forming drug; or else, as in the case of headache medicines, have a ruinous effect upon the heart so that the net effect is that the man swaps a mild case of headache for a bad case of heart disease.

As the small boys would say, we are going to "stick by our stickums." There may be a few good preparations in the bunch, but they are scarcer than four-leafed clover; and the only safe rule is to let the whole gang of patent medicine fakers severely alone.

A splendid portrait of the late Dr. Patrick Livingston Murphy, the first superintendent of the State Hospital at Morganton, was presented to North Carolina on April 16th by the State Medical Society, the exercises being held in the hall of the State Senate. Dr. J. Howell Way, chairman of the committee, presided over the exercises and expressed the hope that this signal honor paid Dr. Murphy was but the forerunner of a greater honor to be paid by the people of this State to the character, ability, genius and devotion of this man.

Dr. R. H. Lewis, a lifelong friend of Dr. Murphy, presented the portrait to the State in words of feeling and beauty. The acceptance was by Governor Craig. The portrait was pronounced by those who knew Dr. Murphy as a splendid likeness.

Governor Craig, in accepting the portrait to be placed in the exalted company of North Carolina's famous men, said:

"We, and they who come after us, should emulate his virtues when we look upon his face, ennobled by virtue and great human sympathy. With a soul aglow with the gospel of universal brotherhood, he heard the cry in the darkness and commanded North Carolina to a sublime and unselfish duty. The work of his love and genius is the greatest tribute to the character of our State, and has placed her foremost in the rescue of the unfortunate.

"His work was inspired by the beauty of devotion and sacrifice. In the joy and pathos of his genial spirit he bore the sorrow and sufferings of his patients, until he fell in full activities and the satisfaction of accomplishment. With the full possession of his powers, he passed to that still country where the heaviest-laden wayfarer at last lays down his load. He is to us a priceless and everlasting possession, for he is of the order of God's nobility."

Board of Medical Examiners of the State of North Carolina.

The meeting of the Medical Society of the State of North Carolina for the year 1913 was originally fixed at June 17th, and that of the Board of Medical Examiners at June 10th. A change in the date of these meetings was made, but it was found impracticable for many of the applicants to meet the change, and it has now been decided to hold these meetings on the date originally appointed.

W. W. McKenzie, M.D., President, Salisbury, N. C.

Benj. K. Hays, M.D., Sect'y-Treas., Oxford, N. C.

J. C. Rodman, M.D., Washington, Surgery.

L. B. McBrayer, M.D., Asheville, Gynecology and Obstetrics.

W. W. McKenzie, M.D., Salisbury, Anatomy and Pathology.

H. H. Dodson, M.D., Greensboro, Practice of Medicine.

John Bynum, M.D., Winston-Salem, Materia Medica and Therapeutics.

J. L. Nicholson, M.D., Richlands, Chemistry and Diseases of Children.

Benj. K. Hays, M.D., Oxford.

The next annual meeting will be held at Morehead City June 10, 1913.

REQUIREMENTS FOR ENTRANCE TO EXAMINATION FOR MEDICAL LICENSE.

An applicant for license to practice medicine in North Carolina must appear before the Board of Medical Examiners in regular session and present a certificate of good moral character attested by two persons known to the Board, a diploma from a medical college in good standing or a license from some other State, and must deposit fifteen dollars with Secretary of the Board. He will then be examined upon the following branches of medicine: Anatomy, Physiology, Surgery, Pathology, Medical Hygiene, Chemistry, Pharmacy, Materia Medica, Therapeutics, Obstetrics, Diseases of Children and the Practice of Medicine. The examinations are written, oral and practical combined.

He must make an average of eighty per cent. upon all the branches, and he must not fall below thirty-five per cent. upon any one branch.

TEMPORARY LICENSE.

An applicant for temporary license must appear before two members of the Board of Medical Examiners and present a certificate of good moral character, a diploma from a medical college in good standing, and must pay a fee of five dollars. He must then stand a satisfactory oral examination.

A temporary license continues in force only until the next regular meeting of the Board, and is never granted but once to the same applicant.

Applicants for temporary license may call upon any two members of the Board at their homes at any time in the year, selecting the two most easily accessible.

REQUIREMENTS FOR RECIPROCITY.

1. Reciprocity is granted only to men of known reputation and ability. Unless the applicant has had five years experience in successful practice in the State in which he then resides, or two years of successful hospital experience, or has filled positions of medical trust accounted by the Board as the equal of these, and unless he is a graduate of a high class medical college and possesses a good preliminary education, his application will not be considered. The burden of proof is upon the applicant to show what his attainments are.

2. He must not have failed before the North Carolina Board.

3. He must present himself in person before the North Carolina Board at its regular session. To this rule no exception is ever made. He must then pay a fee of fifty dollars.

4. He must fill out a blank application

in regard to his moral character, educational attainments, identity, etc., and file the same with the Secretary at least thirty days before the meeting of the Board. (Blank applications may be obtained from the Secretary upon request.

5. Reciprocity will be granted to physicians who have been admitted by examination to the United States Public Heatth and Marine-Hospital Service, the United States Navy or Army, and have been continuously in service, or have received honorable discharge, and have been in continuous successful practice to the date of application.

In regard to the matter of reciprocity, the State of North Carolina regards the qualifications of the applicant rather than the State from which he comes. In every case it is necessary that the applicant appear in person before the Board of Medical Examiners in regular session, and by this personal interview convince the members of the Board that he is a man of intelligence, sobriety, and high personal character. For this reason it is impossible to make a definite promise sf reciprocity to any man until he has appeared before the Board.

The applicant must also produce papers showing that he has a good preliminary education, is a graduate of a high-grade medical college, and that he has been successful in his medical undertakings since graduation. In addition to the application blank, the applicant must furnish abundant evidence that every statement contained thereon is true. That is, when hospital experience is claimed, it must be accompanied by letters from the proper authorities, showing the time of such service, and certifying that this service was satisfactory. The same requirements are made in regard to other positions of medical trust.

Reciprocal relations have been established with Louisiana, Indiana and Minnesota on a basis of preliminary education and college rating

With Virginia and Texas on a basis of two years' hospital work or five years of successful practice.

The North Carolina Board reserves to itself the privilege of rejecting any applicant for reciprocity without question or comment on the part of the applicant.

South Carolina Medical Association.

The doctors of South Carolina met in Rock Hill, S. C., on April 16th and 17th. A great many physicians of the State were present, besides several prominent men from other States. The session was held in the Hall of the Chamber of Commerce. The officers of the Association were: C. M. Rees, President, Charleston; A. B. Knowlton, first vice-president, Columbia; D. M. Michaux, second vice-president, Dillon; C. P. Aimar, third vice-president, Charleston; E. A. Hines, secretary-treasurer, Seneca.

Councilors: First district, M. G. Elliott, Beaufort; second district, R. A. Gyles, Blackville; third district, G. A. Neuffer, chairman, Abbeville; fourth district, C. B. Earle, Greenville; fifth district, M. J. Walker, Yorkville; sixth district, J. A. Faison, Bennettsville; seventh district, C. F. Williams, Columbia; eighth district, W. P. Timmerman, Batesburg.

The following program was practically carried out:

OFFICIAL PROGRAMME.

Scientific Session—Wednesday, April 16, 1913.

Morning Session—First day, 10 a. m.

Call to order by the president, C. M. Rees.

Divine invocation.

Address of welcome, by Mayor C. W. F. Spencer.

Address of welcome, by Dr. E. W. Pressley, in behalf of the York County Medical Society.

Response, by President C. M. Rees.

The president's address.

Address, "The Conservation of Mental Health," Dr. J. Allison Hodges, Richmond, Virginia.

SYMPOSIUM ON HYGIENE AND PREVENTIVE MEDICINE.

(a) "Personal Hygiene," (b) "The Work of the State Board of Health Laboratory," Dr. F. A. Coward, Columbia.

"Home Sanitation," Dr. Wm. Egleston, Hartsville.

"The Relation of Domestic Animals to the Public Health," Dr. G. McF. Mood, Charleston.

"Quarantine," Dr. R. L. Wilson, Charleston.

"Country Sanitation," Dr. J. Adams Hayne, Columbta.

"School Sanitation," Dr. L. Rosa H. Gantt, Spartanburg.

"Causes of High Infant Mortality and How it May be Reduced," Dr. Wm. Weston, Columbia.

Scientific session adjourns 2 p. m. and reconvenes 8:30 to 10:30 p. m.

"A Practical Method of the Estimation of the Renal Function," Dr. J. L. Dawson, Charleston.

"Ureteral Calculi," Dr. A B. Knowlton, Columbia.

"Tetanus Prophylaxis," Dr. G. A. Neuffer, Abbeville.

"The Value of Serum Reaction in the Diagnosis of Syphilis, and in the Detection

of Recurrences," Dr. G. F. McInnes.

"The Explanation of the Bearing Upon Vitality of the Characteristic Symptoms of Meningitis, with Conclusions, as Regard to Treatment," Dr. J. F. Townsend, Charleston.

"Pus Tubes with Special Drainage," Dr. W. C. Black, Greenville.

"Diet in Disease," Dr. C. C. Geer, Greenville.

"Medical Inspection of Schools," Dr. Theo. Maddox, Union.

"Some Observations of 1,100 Unselected Cases of Appendicitis, with Four Deaths," Dr. LeGrand Guerry, Columbia.

"Congenital Defects of the Stomach," Dr. F. M. Durham, Columbia.

THURSDAY, APRIL 17.

Called to order by the president, C. M. Rees, at 9:30 a. m.

Address, "Surgery and the General Practitioner," Dr. H. A. Royster, Raleigh, N. C.

"Prophylaxis Prognosis and Treatment of Tuberculosis," Dr. E. L. Patterson, Barnwell.

"The Physician's Opportunity," Dr. Fillmore Moore, Aiken.

"The General Surgeon and His Work, with Report of My Last 100 Operations," Dr. R. T. Ferguson, Gaffney.

"Beneath the Cover Glass," Dr. N. T. Clark, Campobello.

"A Further Report on Laryngeal Diphtheria," Dr. E. W. Carpenter, Greenville.

"Albuminuria: Its Clinical Importance and Prognosis," Dr. J. J. Watson, Columbia.

"Bone Graft in Ununited Fractures," Dr. S. C. Baker, Sumter.

"Some Often Overlooked Causes for Disturbances of the Heart," Dr. E. T. Wannamaker, Jr., Cheraw.

"The Toxemia Incident to Pregnancy," Dr. R. Lee Sanders, Anderson.

"A Report of an Unusual Case of Vesico-Vaginal Fistula, with a Method of Operating," Dr. H. W. Rice, Columbia.

"Iodine in Country Practice," Dr. W. J. Burdell, Lugoff.

"The Surgery of Remote Organs for the Alleviation of Gastric Symptoms," Dr. L. A. Griffith, Columbia.

"Essential Hematuria," Dr. J. H. Taylor, Columbia.

"A Few of the Things I Have Learned at the Pickens County Medical Association," Dr. W. A. Woodruff, Cateechee.

"Modification of Halstead's Breast Operation," Dr. A. E. Baker, Charleston.

"Morphinism," Dr. W. C. Ashworth, Greensboro, N. C.

"Treatment of Cancer," Dr. G. H. Bunch, Columbia.

"A Case of Cæsarean Section Hitherto Not Reported," Dr. John Lunny, Darlington.

"The Importance of Accurate Diagnosis of Affections of the Eye," Dr. C. W. Kollock, Charleston.

"Remarks on Gunshot Wounds of the Abdomen, with Report of a Case," Dr. Lindsay Peters, Columbia.

"Some Factors on the Early Diagnosis of Tuberculosis," Dr. C. F. Williams, Columbia.

"Duodenal Ulcer," Dr. G. T. Tyler, Greenville.

"Gases in the Stomach," Dr. F. M. Durham, Columbia.

"The Report of a Case of Frontal Sinus; Killian's Operation; Recovery," Dr. C. W. Kollock, Charleston.

The new officers for the ensuing year are as follows:

President, Dr. Wm. Weston, Columbia; first vice-president, Dr. J. Roddy Miller, Rock Hill; second vice-president, Dr. W. D. Outz, Edgefield; third vice president, Dr. J. H. Miller, Cross Hill; secretary-treasurer, Dr. E. A. Hines, Seneca. Dr. Hines is also editor of the South Carolina Medical Journal.

Fifth District Medical Society of North Carolina.

Dr. J. W. Halford, of Chalybeate Springs, was elected president of the Fifth District Medical Society at its concluding session in Fayetteville April 22nd. Dr. A. B. Croom, of Maxton, was re-elected secretary and Dr. Roscoe D. McMillan, of Red Springs, was made treasurer.

An interesting series of addresses featured the program. Dr. J. Frank Highsmith addressed the convention on "The Correlation Existing Between the Surgeon and the Interne as Compared to 30 Years Ago." Dr. Hubert A. Royster, of Raleigh, spoke on "Sigmoid Adhesion." "Some Minor Surgical Hints" was the theme of Dr. T. Marshall West. "Adenoids" furnished the subject discussed by Dr. M. R. Gibson, of Maxton. "Mode of Infection, Diagnosis and Treatment of Tuberculosis and Peritonitis" by Dr. R. L. Pittman and the "Significance of Preventive Medicine" by Dr. B. W. Page, of Lumberton, were other addresses.

The Ninth District Medical Society of North Carolina met in Hickory April 23rd. The meeting was opened with prayer, after which the physicians were given a cordial welcome by several of the citizens of the city in short addresses, which were responded to by Dr. David J. Hill, of Lexington.

The opening address was delivered by the president, Dr. Isaac M. Taylor, of Morganton.

Dr. W. O. Nisbet, of Charlotte, read a paper on "Cancer of the Stomach," Dr. Henry F. Long, of Statesville, on "Ectopic Gestation," Dr. A. B. Goodman,of Lenoir, on "Anaesthesia and Anaesthetics," Dr. R. A. Campbell, of Statesville, on "History and Diagnosis."

Dr. C. M. Van Poole, ex-president of the North Carolina Medical Society, delivered a lecture on "The Nature and Duty of the Medical Profession to the Nation in Peace and War."

Medical Society Elections.

Bienville Parish Medical Society, of Louisiana, at the annual meeting held in Arcadia on April 1, elected the following officers:

President, Dr. Oliver O. Hamner, Bienville; vice-president, Dr. J. M. Mosely, Arcadia; secretary-treasurer, Dr. Edwin O. Edgerton, Arcadia.

Dr. F. T. Meriwether, of Asheville, has recently completed a thirty room addition to his private hospital. It is modern in every respect, being equipped with elevator, dumb waiters, clothes chests, having a vacuum cleaner outlet in every room and in the halls. It has sixteen bath rooms in the building, several of them being private baths. The building is of brick and stone with metal tile roofing, hard wood finish throughout, the doors being of the sanitary type without panels. The bath rooms and lobbies have tile floors and the porches terazzo. There is a large sun-parlor from which a most magnificent view of the surrounding mountains can be obtained. The new operating room is large, being twenty by twenty-six feet, and is probably one of the best lighted and equipped operating rooms in the South. There are hopper rooms on each floor, thus obviating the necessity of the nurses using the bath rooms for bed pans, etc. Each floor has also a kitchenette, with a refrigerator, gas stove and sink, to be used for the patients on each floor, these being in addition to the main diet kitchen.

The hospital is run for Dr. Meriwether's private patients exclusively.

Medical College of Virginia and University College of Medicine Amalgamated.

Dr. S. C. Mitchell, at this time president of the University of South Carolina, but formerly connected with Richmond College, has been chosen president of the school to enter upon his duties in June. Dr. McGuire will be dean of the faculty.

The Medical College of South Carolina.

The board of trustees meeting recently in the governor's office elected the faculty for the South Carolina Medical College of Charleston, which was created by an act of the last general assembly. A resolution was adopted expressing the thanks of the board to the citizens of Charleston for the gift of $75,000 for the new institution. This fund will be used for a new building. The personnel of the Charleston Medical College faculty was unchanged and strengthened by the selections for the faculty of the new institution. Dr. Robert Wilson, Jr., of Charleston, was elected dean of the college at the first meeting of the board, held March 14. Yesterday the board elected Dr. Lane Mullally as vice dean. Oscar W. Schleeter was elected registrar. The lecturers, instructors and other assistants will be elected by the faculty.

MEMBERS OF BOARD.

The members of the board of trustees are: The goverunor; J. E. Swearingen, State Superintendent of Education; Dr. J. B. Black, Bamberg; Dr. W. A. Tripp, Easley; Dr. J. M. Davis, North; Dr. Charles Simms, Cowpens; Dr. R. E. Hughes, Laurens; Dr. W. W. Fennell, Rock Hill; Dr. T. G. Croft, Aiken, and Dr. S. B. Fishburne, Columbia, acting secretary.

THE FACULTY.

The following are the members of the faculty:

Anatomy: Professor of anatomy, not filled; assistant professor of anatomy, Dr. Cyril O'Driscoll.

Bacteriology: Professor of bacteriology and hygiene, Dr. G. McF. Mood.

Chemistry: Professor of chemistry, Dr. F. L. Parker, Jr.

Dermatology and Syphilis; Clinical professor of dermatology and syphilis, Dr. J. A. Ball.

Materia Medica and Therapeutics: Professor of materia medica, therapeutics and roentgenology, Dr. A. R. Taft.

MEDICINE.

Medicine: Professor of medicine, Dr. Robert Wilson, Jr.; professor of the principles and practice of medicine, Dr. John L. Dawson; professor of clinical medicine, Dr. Joseph Maybank; clinical professor of medicine, Dr. Edward Rutledge; assistant professor of medicine and neurology, Dr. E. L. Jagar; clinical professor of pediatrics, Dr. W. P. Connell.

Obstetrics: Professor of obstetrics, Dr. Lane Mullally: assistant professor of obstetrics, Dr. G. Fraser Wilson.

Ophthalmology, Otology, Rhinology and Laryngology: Professor of ophthalmology and otology, Dr. E. F. Parker; professors of rhinology and laryngology, Dr. C. W. Kollock, Dr. W. P. Porcher.

Pharmacy: Professor of pharmacy and pharmacology, W. H. Zeigler, Ph.G.

Physiology and Embryology: Professor of physiology and embryology, P. M. Rea.

Pathology: Professor of pathology, to be filled.

Surgery: Professor of abdominal surgery, Dr. A. J. Buist; professor of general surgery, Dr. C. M. Reese; professor of gynecology, Dr. R. S. Cathcart; professor of principles of surgery and surgical pathology, Dr. C. P. Aimar; professor of genito-urinary surgery, Dr. T. P. Whaley; clinical professor of abdominal surgery, Dr. A. E. Baker; assistant professor of surgery, Dr. A. J. Jervey.

RESOLUTION ADOPTED.

The following resolution was adopted:

"Whereas, the citizens of Charleston and other friends of the State Medical College of South Carolina have contributed the sum of $75,800 for the purposes of a new building for the institution; be it

"Resolved, by the board of trustees, That the thanks of the board are extended to each and every individual contributor to said institution for their loyalty and assistance to the institution.

"Resolved 2nd, That the special thanks of the board be extended to the members of the various committees, who, by their efficient work, have made it possible to place this institution upon a first-class basis."

The North Carolina Medical College.

Tuesday evening, May 6th, this college graduated 25 medical students. The exercises took place at the Presbyterian College for Women at 8:30 o'clock. The address was made by Dr. C. Richmond Harding, of Davidson College.

Miss Mary M. Parker, of Georgetown, S. C., made the highest grade, it being 94.73. Mr. P. J. Chester, of Mooresville, was second with 93.9; Mr. C. B. McDaniel, of Forest City, was third with 93.84; and Mr. W. W. Johnston, of Rowland, was fourth with 93.56.

Following is an official list of the twenty-five successful students:

William Councill Boyden, Boone; Bernard McAuley Bradford, Huntersville; Grover Cadell, Carthage; Pinckney Jones Chester, Mooresville; Posey Leff Choate, Sparta; Robert Frank Flowe, Davidson; Lauren Osborne Gibson, Statesville; Leland Vain Grady, Seven Springs; Rupert Sylvester Helsabeck, Rural Hall; Charles Lamar Hunsucker, Conover; Royal Garfield Jennings, Moravian Falls; Wiley Warren Johnston, Rowland; Benjamin Leroy Long, Bostic; John Calvin Matthews, Charlotte; Charles Bostic McDaniel, Forest City; William Rufus McIntosh, Roberdel; Lon Jennings Moorefield, Guilford College; Joseph Moxley, Piney Creek; Miss Mary Moutrieville Parker, Georgetown, S. C.; George Henry Petteway, Richlands; Hector McLean Person, Fremont; Thomas Grover Sharpe, Hiddenite; Thomas Thompson Stixrud, Christiana, Norway; Ashley Barrington Weathersbee, Williston, S. C.; Robert Bruce Wilkins, Draughon.

Annual Meeting American Medical Editors' Association.

The annual meeting of this society will be held June 16th at the Hotel Radisson, Minneapolis, Minn.

An interesting program has been prepared covering items of journalistic as well as general information.

The annual banquet will be held on the evening of the 16th, at the Radisson hotel.

Miss Isabell Simmons Weds Dr. J. F. Patterson.

In the Episcopal Church at Newbern, N. C., on April 16th, Miss Isabell Simmons, daughter of Senator and Mrs. Furnifold McLendell Simmons, was married to Dr. J. F. Patterson.

The event was one which was not only of local interest, but guests were present from all over North Carolina and from other States, and without the least doubt the occasion was one of the most brilliant in the history of Newbern.

The most noticeable of the many gifts was a beautiful silver service, presented by Senator Simmons' Democratic colleagues on the Finance Committee. Another handsome silver service was presented by the Democratic congressional delegation.

Dr. C. O. Burruss and Miss Margaret Byers, of Sharon, S. C., were quietly married at the home of the bride's parents Wednesday evening April 16th, 1913. Dr. Burruss graduated from the University of Maryland in 1906.

BOOK NOTICES.

Nervous and Mental Diseases. For Students and Practitioners. By Charles S. Potts, M.D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia. New (third) edition, enlarged and thoroughly revised. In one 12mo volume of 610 pages, with 141 engravings and 6 full-page plate. Price, cloth, $2.75 net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

Diseases of the Mind and Nervous System are among the most intricate and difficult of comprehension of all subjects in medicine, and yet the general practitioner, who probably has not devoted special study to this department, is almost invariably the one who first meets these cases and refers them to the alienist. A medium-sized work, short, clear, and to the point is therefore a great desideratum, and this has been shown in the demand which has brought Professor Potts' book to its third edition. In this new revision the chapter on general symptomatology and methods of examination has been amplified. A description of tic embodying the present-day view of that disorder, and short descriptions of myotonia atrophica, progressive lenticular degeneration and bysbasia lordotica deformans have been added. The importance of the examination of the cerebrospinal fluid and determination of the existence of the Wassermann reaction in the diagnosis of certain diseases of the nervous system has been realized and the latest views incorporated. In brief, the work includes the most recent advances. It is extremely well illustrated; and a better book for the purposes of the general practitioner or for the college student would be hard to find.

International Clinics. By Leading Members of the Profession Throughout the World. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U. S. A., with the collaboration of John A. Witherspoon, M.D., Nashville, Tenn.; Sir Wm. Osler, M.D., Oxford; A. McPhedran, M.D., Toronto; Frank Billings, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballentyne, M.D., Edinburgh; John Harold, M.D., London: Richard Kretz, M.D., Vienna; with regular correspondents in Montreal, London, Paris, Berlin, Vienna, Leipsic, Brussels, and Carlsbad. Volume I. Twenty-third Series, 1913. Philadelphia and London: J. B. Lippincott Company.

The price of this book is $2.00.

This volume contains illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, Paediatrics, Obstetrics, Gynecology, Orthopaedics, Pathology, Dermatology, Ophthalmology, Rhinology, Laryngology, Hygiene, and other topics of interest to students and practitioners.

This volume, like the others of this series, is well bound and carefully indexed. The articles are of an extraordinary type, many of which are thoroughly illustrated.

We are glad of an opportunity to recommend this volume.

The Lovers of Skye. By Frank Walker Allen, Illustrated by W. B. King. Indianapolis: The Bobbs-Merrill Company, Publishers.

This is one of the most interesting and thoroughly clear little novel recently published. From its first chapter the reader becomes more and more interested in the story, and not once does this interest cease.

The volume is neatly bound in cloth binding.

The Modern Treatment of Nervous and Mental Diseases. By eminent American and British authors. Edited by William A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington, D. C.; Professor of Nervous and Mental Diseases in the Georgetown University and in the George Washington University; Lecturer on Mental Diseases in the U. S. Army and U. S. Navy Medical School, Washington, D. C., and Smith Ely Jelliffe, A.M., M.D., Ph.D., Adjunct Professor of Diseases of the Mind and Nervous System in the Post-Graduate Medical School and Hospital; Visiting Neurologist to the City Hospital; Consulting Neurologist to the Manhattan State Hospital, New York, N. Y. Two octavo volumes, containing about 900 pages each, illustrated. Per volume, cloth, $6.00, net. Lea & Febiger, Publishers, Philadelphia and New York, 1913.

When one realizes that insanity and idiocy are increasing in some of the States faster than the population, and that a very large percentage of the feeble-minded men and women are not properly cared for and procreate mentally deficient children, the great importance and timeliness of a work dealing with the problems involved in this situation become at once apparent. While these volumes go fully into the most modern medical phases of the issues under discussion, they devote a large amount of space to the broader question of prophylaxis, which is obviously the department where the greatest and most far reaching results can be attained. This work marks a new departure in giving full consideration to

such subjects as Eugenics and Heredity in Nervous and Mental Diseases, Education, Sexual Problems, Educational Treatment of the Feeble-Minded, Delinquency and Crime, Immigration and the Mixture of Races, and Alcoholism and the Alcoholic Psychoses. It then takes up the treatment of the various forms of nervous and mental diseases, and discusses them conjointly, for the authors and editors regard the nervous system "as inclusive of the mind." It exhibits throughout the most modern point of view, and the most advanced methods for handling these cases. It is of prime interest, not only to all medical men, but also to hygienists, government, State and municipal officials, legislators, military men, social welfare workers, charity organizations, and all those who have to do with the betterment of these unfortunate classes.

Diseases of Women. By Thomas George Stevens, M.D., B.S. (London); F.R.C.S. (Eng.); M.R.C.P. (Lond.). Obstetric Surgeon, with charge of Out patients, St. Mary's Hospital, Paddington Surgeon (Gynecological), the Hospital for Women, Soho Square, Cloth. Price, $5.50. Pp. 432, with 202 illustrations. London: University of London Press. New York: Oxford University Press, 29-35 West 32nd Street, New York, 1912.

This is a very valuable book on the subject of Diseases of Women. The classification is in the main a pathological one and gains thereby in the clearer presentation of fact. The text is short, concise, to the point and is extremely readable. There are many things which must of necessity be left out in such a short text, but it can be safely said that the major portions of gynecological practice are incorporated within the 426 pages. There are in all 202 illustrations including a number of photo-micrographs and most of the illustrations have been drawn by the author. Not the least important in a manual of this character, are the last three chapters devoted to preparations for operations and technique; after treatment of operation and post-operative complications

This book should be extremely useful to the medical student and to the gynecologist. The book is issued in an extremely attractive form, entirely in keeping with the sister volumes of the London medical publications.

We take great pleasure in recommending this most excellent volume.

A Clinical Manual of the Malformations and Congenital Diseases of the Fetus. By Prof. Dr. R. Birnbaum, Chief Physician to the University Clinic for Women at Gottingen. Translated and annotated by G. Blacker, M.D., B.S., F.R.C.S., Obstetric Physician to University College Hospital. Cloth. Price, $5.00. Pp. 379 with 58 illustrations in the text and eight plates. Philadelphia: P. Blakiston's Son & Co., 1912.

The publication of a book on "Malformations and Congenital Diseases of the Fetus" has been needed for some time. It is of particular value that the writer has addressed himself to the task of presenting the accumulated knowledge of fetal malformations from the viewpoint of their most practical importance—the clinical application. There is scattered throughout a variety of text books a great amount of information dealing with malformations and congenital diseases from the anatomical, pathological, physiological, medico legal and clinical aspect. In this book we have this information collected and properly classified. The Dr. being a gynecologist has naturally considered the obstetrical side of the question as of the utmost clinical importance. This is what one would expect as fetal malformations must come, first and foremost, within the field of the obstetrician.

He defines malformation as a condition which may be attributed to deviations from the normal course of intra-uterine development. If the deviation results in a pronounced deformity, it is termed a "monster" while those less conspicuous deviations effecting only circumscribed portions of the body are termed "anomalies." The various etiological factors of malformations are considered. Those intrinsic and intra-uterine causes and the less important external mechanical influences. Clearly and succinctly, are considered the arrested development of the whole embryonic rudiment, the malformations as the result of defects in the spinal closure and skull cap with a chapter of 35 pages devoted entirely to hydrocephalus and obstetrical injuries to the skull.

The book is a very valuable one and we have looked over it with a good deal of pleasure and profit.

The Catarrhal and Suppurative Diseases of the Accessory Sinuses of the Nose. By Ross Hall Skillern, M.D., Professor of Laryngology, Medico-Chirurgical College; Laryngologist to the Rush Hospital; Fellow of the American Laryngological and Otological Society; Fellow of the New York Academy of Medicine; Member of the Society of German Laryngologists, etc. Philadelphia & London: J. B. Lippincott Co. Price, $5.00.

During courses of teaching the treatment of accessory sinus diseases very frequently

students have made inquiry regarding the proper handbook to aid their studies in this direction. In the German language Hajek and Zarnico would instantly rise to the mind of the well-equipped teacher as admirable works, both from the viewpoint of scientific accuracy and that of practical application.

In the French language Luc, and Sieur and Jacob, have contributed works of decided merit.

In the English language Logan Turner has displayed a commendable spirit of research and has collected much valuable information of a generol character, but it cannot be claimed that his work is adaptable as a general text-book.

Several excellent works of American and English authars, embracing the Nose, Throat and Ear as a whole, have appeared, but their general scope has not permitted the consideration in minute detail of nasal accessory sinus disease.

To set forth in the English language a thorough and exclusive treatment of this subject has been the inspiration of this work. It will be noted that repetitions occur in several places. These have been intentional, not only to thoroughly impress these parts on the mind of the student, but to obviate the necessity of continually referring to other portions. Extensive references have been made.

This is a handsomely bound book of 389 pages, correctly indexed. The illustrations in the book are numerous and very appropriate. We regard the book as a great addition to this branch of medical and surgical literature.

The Operating Room and the Patient. By Russell S. Fowler, M.D., Chief Surgeon First Division, German Hospital, Brooklyn, New York. Third Edition, re-written and enlarged. Octavo volume of 611 pages with 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, $3.50 net.

The author of this magnificent book gives very appropriate credit to the following eminent physicians: Dr. James W. Ingall for the paragraphs upon enucleation of the eyeball; to Dr. William W. Laing for his collaboration in the paragraphs on vaccine therapy; to Dr. Carl Fulda for translations from the German; to Dr. W. C. Woolsey for collaboration in the paragraphs on tracheotomy; to Dr. Paul O. Humpstone for contributing the paragraphs upon obstetric operations; to Mr. Francis A. Deck for his admirable illustrations, many of which are from "A Treatise on Surgery," by George Ryerson Fowler; to the W. B. Saunders Company for their co-operation, and to all those faithful friends who make life worth living and work a pleasure.

The author points out the necessities of complete preparations in all cases of surgery in hospitals and in private homes. The writer has kept in mind simplicity in the technic of the preparation and also the operation. It has been his motto to simplify and standardize preparations and operations, hence many of the early methods have been discarded for others which experience has proven efficient because better and simpler.

The underlying principles of successful surgical treatment are forcibly set forth in this book as follows: Careful anesthesia, exact hemostasis, asepsis, rest of the injured part, use of rest of the body, feeding advanced to normal as fast as the asenthetic weakened stomach can care for it, and the following of the general rules of hygiene.

A Reference Handbook for Nurses. By Amanda K. Beck, graduate of the Illinois Training School for Nurses. Third edition, revised and enlarged. 32mo of 229 pages. Philadelphia and London: W. B. Saunders Company, 1913. Flexible leather, $1.25 net.

The continued demand for this handbook has made it necessary to bring out the third edition. The change in this edition consists of a number of new formulas and simplified methods which recent experimentation has proved to be valuable. The suggestions for various kinds of baths, the best way of giving them, and the articles needed for the treatment should be of much value; so also should the list of instruments used in various surgical operations.

Epidemic Cerebrospinal Meningitis. By Abraham Sophian, M.D., formerly with New York Research Laboratory. Twenty-three illustrations. Price, $3.00. St. Louis: C. V. Mosby Company, 1913.

Many of the experiences in the laboratory and at the bedside so obtained are recorded in this book; practical attention has been given to a description of methods employed in scientific municipal control of epidemics. Many observations on the blood pressure are noted and the method of controlling the administration of the antimeningitis serum by changes in blood pressure is carefully described. The purpose of the work throughout is to convey a thorough yet simple description of the clinical and laboratory findings in the disease and to familiarize in clinical analysis of disease. The book contains 372 pages, is well indexed, and the illustrations are good. The publishers are to be congratulated on having the privilege of publishing such a valuable book.

Transactions of the American Pediatric Society. Twenty-fourth session held at the Homestead Hotel, Hot Springs, Virginia, May 29, 30 and 31, 1912. Edited by Linnaeus Edford La Fetra, M.D. Volume XXIVi

The transactions of this society has been gotten up in a very attractive form. It is a volume of 318 pages, beautifully bound, and has many very instructive illustrations.

Fourteenth Biennial Report of the North Carolina State Board of Health, 1911-12. Raleigh: Edwards & Broughton Co., State Printers and Binders, 1913.

This report of the Board of Health of North Carolina 1911-12 is very accurately and appropriately arranged, and is a volume of 267 pages. It has a great many tables which if studied will give a great deal of information as to health conditions in North Carolina.

President and Congress.

President Wilson's appearance in person, to read his message from the Speaker's desk at the opening of the tariff session to the members of both houses of Congress, should not be regarded as an isolated detail or a mark of eccentricity. Our new President was not trying to advertise himself, and certainly he was not imitating British royalty. The appearance of the King, with his brief and simple address at the opening of Parliament, is a survival that has become meaningless because the King takes no part either in the process of making laws or in that of administering them. But in this country the President is in complete authority over the business of executive government, and he also bears such relationship to the party in power that under normal circumstances he is more influential than anyone else in guiding and directing legislative policies. Mr. Wilson has, therefore, always argued that we could accomplish better results, in our practical affairs of government, if the President and his cabinet could be in closer relationship with the two houses of Congress. In the selection of his cabinet our new President had in mind this very thing. He appointed men whom he believed to be capable of working well with Congress, and who could when called upon present the affairs of their respective departments either to Congressional committees or to either chamber as a whole, with clear thought and incisive speech. We must not be surprised, therefore, if Congress by joint resolution should in the near future provide for some participation by cabinet members in the discussion of appropriation bills, and other pending measures affecting their departments.—From "The Progress of the World," in the American Review of Reviews for May.

W. B. Saunders Company, Publishers of Philadelphia and London, have issued another edition (17th) of their handsome illustrated catalogue.

In going through this edition we find it describes nine new books and ten new editions, not described in the previous issue. These new books are of great interest to the medical man, because they treat of subjects being daily discussed in medical circles.

Any physician get a copy of the Saunders' catalogue by dropping a line to these publishers. A copy should have a place on the desk of every physician, because it is most valuable as a reference work of modern medical literature. Send to Saunders today for a copy.

Morphine, Cocaine and Alcohol.

We call the attention of the profession to the "ad" of Dr. J. W. Williams, of Richmond, Va., published in this number of the Journal, as to the treatment of morphine, cocaine and alcoholic addiction. This new treatment, based upon the findings of The Opium Congress of China, is upon the very highest plane of medical ethics; has no connection whatever with the "sanatoria" and fake "cures" scattered throughout the country, and claims 85 per cent. of cures—the highest per cent. yet attained by medical science in any part of the world. The Southern Clinic, published at Richmond, Va., in the March number says: "Dr. Williams' Good Work: It is very gratifying to his friends to note the very marked success of Dr. John W. Williams, of this city, in the cure of alcoholic, morphine and cocaine cases and the abundant patronage coming to him in consequence."

Abstracts of the Leading articles of the month.

Hematoma of the Vulva.—Lehle (Munch. med. Wochensch.) reports an unusual case of hematoma occurring immediately after childbirth. The patient, a woman of 28 years, I-para, after delivery, which was perfectly normal, suffered from a sharp pain in the external genitals, followed in about one-half hour by the development of a swelling which constantly increased in size. The midwife called in a physician who found a hematoma about as large as the fist in the left labium, which was quite painful. After

the application of cold no further increase in the size of the tumor occurred, and as there were no serious symptoms of any kind, he left the patient, but, at his next visit, a short time after, found a mass of the size of a child's head, which had undergone rupture. Although the hemorrhage had ceased the patient was so exsanguinated that it was thought advisable to transfer her to the hospital. No further bleeding occurred; applications of ice and compresses soaked in acetate of aluminum solution were made, and at the end of twenty-four hours the swelling had considerably diminished after the evacuation of blood clots through the place of rupture. No operative intervention was found necessary and the patient made a complete recovery. Although the hematoma was probably the result of the rupture of the subcutaneous blood vessels of the vulva by the passage of the head, it is strange that there was no other injury, such as perineal or vaginal laceration. Lehle considers the prognosis of hematoma as always favorable if the tumor recedes spontaneously and intervention is unnecessary, or if its rupture is not followed by suppuration or necrosis; also when the puerperium runs an afebrile course. The Dr. does not like the expectant treatment in all cases, especially in private practice, and considers operative intervention only demanded in case of severe pain or symptoms of general anemia from continued bleeding. Under these circumstances an incision should be made, the coagula removed, and the hemorrhage directly arrested either by ligation or tamponade.

The Use of Local Anesthesia for the Reduction of Fractures.—Braun (Deut. med. Wochensch.) says that Lerda and Zuenn have been very successful in reducing and treating fractures without pain by means of a local anesthesia with a one-half of one per cent. cocain solution. The Dr.'s own results in 50 cases of subcutaneous fractures and dislocations have been equally satisfactory. The Dr.'s method consists in injecting a 1 per cent. novocain-suprarenin solution, the pain subsiding in a few minutes and remaining absent for a considerable time. In three cases of fracture of the radius where 10 ccm. of the anesthetic solution were used reduction was unattended with the least pain, while in seven cases of fractures of the forearm the method of plexus anesthesia produced complete muscular relaxation and loss of sensation. Backward dislocation of the forearm, as well as supracondylar fracture of the arm with dislocation, could be reduced without the least suffering. In fifteen cases of luxation of the shoulder-joint plexus anesthesia was employed ten times and inter-articular injection in five more recent cases. In making the latter 10 ccm. of the novocain-suprarenin solution were injected just beneath the acromion into the joint and another 10 ccm. down to the head of the humerus, which was located below the clavicle. The author also reports favorable results in fractures of the ankle, leg and knee, and in dislocations at the hip-joint. No deleterious effects were ever observed.

Inclusion Bodies in Scarlet Gever.—Granger and Pole (Brit. Jour. Child. Dis.) have examined blood films from 191 cases of scarlet fever, thirty-seven cases of measles, twenty-seven cases of diphtheria, twenty-four cases of tonsillitis, twenty cases of whooping-cough, twenty cases of serum rash, seven cases of urticaria, four cases of pneumonia, three coses of erysipelas, and ten normal patients. The writers adopted Manson's stain at first, but later found better results, and with less trouble, by staining with carbol methylene-blue. The slides are fixed by passing three or four times through the flame afier having been dried in the air. They are then dipped in water. The extra water is removed by one or two vigorous shakes, and they are then stained by carbol methylene-blue for 30 seconds (methylene-blue 1.5 grams, absolute alcohol 10 cubic centimeters, 5 per cent. solution of carbolic in water 100 cubic centimeters). The red corpuscles are not stained. The appearance of the polymorphs and bodies is the same as in Manson's stain. They state that except in the extremely fatal toxic type of scarlet fever, Dohle's inclusion bodies will probably be found in every true case of scarlet fever during the first four days of illness. The absence of the bodies practically excludes scarlet fever. The bodies are present in almost every case up to the fourth day, after which they appear with lessening frequency and are absent in most cases after the eighth day, though in some few cases they may be found as late as the third or fourth week. The bodies are present in quite a large proportion of cases of diphtheria, measles and tonsillitis. Therefore the presence or absence of the bodies is of no use in making a differential diagnosis between these diseases and scarlet fever. The bodies are found in most diseases caused by ordinary pyogenic organisms, especially if streptococci are present. The bodies are absent in toxic rashes. It is impossible to diagnose scarlet fever from film examination alone.

Hypodermic Injections of Oxygen in Asphyctic States.—Bayeux (Ann. de med. et chir. inf.) has injected it in some hundreds of cases, during two years. Since his previous report at the Congress in Rome, the Dr. has used oxygen injections in the treatment of forty-eight additional cases of tuberculosis, some of these for as much as two years. These injections have a favorable effect on congestion and asphyxia in the tuberculous, such as causes paroxysmal dyspnea, hemoptysis, and progressive denutrition. The general progress of the disease is stayed by the use of the oxygen, at the same time that the local lesion is improved. The oxygen restores to the blood the oxygen which the dyspnea prevents it from gaining by respiration. The painful air hunger is relieved by oxygen, and the lungs are restsd from their overwork. In severe pertussis the Dr. obtained relief from the paroxysms; and also in spasmodic laryngeal diphtheria. In dyspnea due to great altitude marked relief was obtained by oxygen. Experiments by the author upon rabbits have shown that the anoxemia of altitudes is an actual fact, and that hypodermic injections of oxygen improve the condition of the blood in these cases. The technic is simple, He describes his apparatus for infusing the oxygen. It enables him to gauge exactly the amount of oxygen injected, which has its importance, since too much injected causes painful reaction in the subject.

Hedonal Anesthesia in Children.—Ward (Brit. Jour. Child. Dis.) says that hedonal given intravenously is one of the most pleasant anesthetics. Its administration is practically free from discomfort. Excellent muscular relaxation is obtained. In operations about the head it is of advantage not to be hampered by the armamentarium of the anesthetist. With hedonal the respiration is quiet and even throughout, and no explosive coughing occurs even when the chest is opened for empyema. The after-results of the anesthetic are excellent. The drug is excreted very slowly, and a quiet sleep for five to seven hours is usualiy obtained. On recoverv the child is ready to take food, but inclined to sleep for the next twenty-four hours. The absence of vomiting is a noticeable feature. In its immediate effect hedonal is probably as dangerous as chloroform and much more daugerous than open ether. Its late effects, however. compare very favorably with any other anesthetic. The estimation of fhe depth of anesthesia is difficult. Practically the only way one can determine when the patient is sufficiently under for the operation to be begun is by noting the reaction to skin stimuli. If the skin reflex is quite absent no more anesthetic is necessary for some time and very little more will cause respiratory depression. The slowness with which hedonal is excreted demands very careful administration. The use of hedonal is contraindicated in short operations, because of the slow recovery from the effects of the anesthetic. It is contraindicated in the ordinary hospital list of operations because of the extra time consumed and the excellent results that attend anesthesia by open ether with the preliminary injection of morphia and atropine. It is the best anesthetic for brain operatins. Ether is here inadmissible because of the increased hemorrhage, and prolonged chloroform anesthesia should be avoided whenever possible in children. Hedonal appears to have no irritating effect on the lungs, and therefore it could be used with advantage in any case where the lung condition contraindicated an inhalation anesthetic. Hedonal should be considered if a patient has already had a general anesthetic and dreads another operation on that account.

Stenosis of the Bile Ducts in a Newborn Child.—Sugi (Monatsschr. f. Kinderheil) details a case of stenosis of the hepatic duct in a three-weeks-old child, which had suffered from hemorrhage from the navel in the second week, but without icterus. The child died with a diagnosis of hemorrhagic diathesis and showed ecchymosis of the skin, pleura, thymus, and mucous membranes. The liver was icteric from a stenosis of the hepatic duct of inflammatory nature, the obstruction being formed of tissue granulation. The ductus choledochus was unchanged. There have been many reports of congenital atresia of the ducts but not of inflammatory stenosis. The question has been asked whether such a condition is not the result of inherited syphilis. This has been found to be the case in general; but in the writer's case the lesions of syphilis were not found in the other organs, nor were spirochetes found in the tissues. The Wassermann reaction was not made, since there was no suspicion of the presence of syphilis until after the autopsy. In three autopsies made by the author in cases of congenital syphilis of the bile passages the hepatic ducts were found to be free from lesions. Possibly there was an infection soon after birth.

Epidemic Catarrhal Jaundice.—Guthrie (Brit. Jour. Child. Dis.) records ten cases of catarrhal jaundice seen by him within three months in children between three and eleven years of age. In three instances more than one member of the same family was affected. The Dr. says that mild epi-

demics of so-called catarrhal jaundice have been specially prevalent in England during the past three years. Although mild in character hitherto, it is possible that at any time they might become more formidable. Catarrhal jaundice must be regarded as due to an acute hepatitis resembling mumps in some particulars. The prognosis in any given case of jaundice in children, whether apparently sporadic or occurring in the course of epidemics, must be guarded; for we have no means of knowing whether it will run a mild and normal course, or terminate as a case of acute yellow atrophy of the liver.

Incontinence of Urine in Children.—Simpson (Edin. Med. Jour.) advises general hygienic measures. Drug treatment he divides according to the condition of the urine. If the urine is negative, the treatment consists in giving a tonic to try and improve the general condition of the child. When this has been improved the administration of belladonna should be begun, beginning with 10 minims of the tincture two or three times a day, and gradually increasing the dose up to 20 to 25 minims. If the urine is extremely acid one must first reduce the acidity by the use of citrate of potash in doses of 10 grains thrice daily; even larger doses may be required. When the acidity has been reduced the belladonna should be begun. If the child's general health is not very good, strychnine added to the prescription is often beneficial. It is inadvisable to give meat when the child is suffering from this "acid" condition. If the urine is alkaline dieting is of the first importance, all carbohydrate food as far as possible being prohibited. If the urine is very alkaline, acid sodium phosphate may be given; when the alkalinity of the urine has been reduced belladonna should be used in the manner stated above. A pure culture of B. coli is frequently obtained from the urine. If the urine is very acid it is wise at first to reduce the acidity by giving citrate of potash, then urotropin in 5 to 10-grain doses thrice daily often proves of immediate benefit. If there is mixed infection salol is often more efficacious. Mixed infection cases are often very troublesome, however, and a vaccine may sometimes be used with great advantage.

Manifestations of Healthy Heart in the Young Frequently Taken as Indications for Treatment.—Mackenzie (Proc. Roy. Soc. Mrd.) mentions the importance of recognizing the youthful type of irregularity, which is characterized by the varying length of the long pauses between the second and first sounds and occurs in perfectly healthy hearts. The great majority of cases showing this type of irregularity are young people. The writer has never found a single case where it has been associated with any form of heart failure. Cardiac murmurs are also often misconstrued, such murmurs being systolic in time, and their position of maximal intensity at the apex, base, or midsternum. These functional murmurs in themselves are consistent with perfect health. Where these murmurs are associoted with heart failure there are invariably evidences that the heart failure is the outcome of the myocardial condition and not of the supposed incompetent valves. Functional murmurs in the young, in the absence of evidence of muscle affection, are signs neither of disease nor of impairment. The only reliable method of estimating the condition of the heart muscle is to acquire a knowledge of its efficiency, and, if it be inefficient, the extent of its limitation. This method consists in finding out how the heart responds to effort and recognizing the symptoms which indicate its exhaustion. The chief symptoms are subjective, the individual himself being conscious of his limitations.

Treatment of Gonorrhea.—Harrison and Harold (Journal of the Royal Army Medical Corps) say that as the result of their efforts at treating gonorrhea in such wise that it shortens the stay in the hospital, they have no brilliant success to record. The writers express the opinion that the use of gonorrheal vaccine has some effect in preventing the complications of the disease; also that the use of atropine has some effect in preventing epididymitis. This is based on Schindler's observation to the effect that when the posterior urethra is inflamed or irritafed, either directly or through massage ef the prostate, reverse contraction of the involuntary muscle fibers of the vas occurs. This is the mechanism by which gonococci lying in the posterior urethra are carried to the epididymis, and explains how it is that so many cases develop epididymitis a few hours after a metal instrument has been passed along the inflamed urethra. Schindler further notes that the hypogastric plexus is paralyzed by administering atropiue, either hypodermically or in the form of suppositories, and that this paralysis prevehts the reverse peristalsis.

One case is reported in which a patient who had suffered from six attacks of epididymitis, each immediately following any aitempt to massage his seminal vesicles, or to administer local treatment to his urethra, an hour following the rectal administration of the atropine suppository went through a thorough prostatic and vesicular massage without the faintest after symptom. The

authors of the paper state that they have since administered atropine suppositories 1-75 of a grain twice daily to each of the gonorrheal cases, and attribute to this some reduction of the incidence of epididymitis as well as the marked freedom of the patients from painful erections and chordee. As a result of careful trial of contrasted methods the writers say that they have obtained the quickest apparent recoveries from the following procedure:

Irrigation of the urethra three times a day with large quantities of weak permanganate of potash solution (1 in 3000 to 1 in 4000) till the discharge has considerably diminished. Then

Injection of zinc and copper solution after each irrigation till the discharge has practically ceased; and finally,

Injections of protargol jelly in place of the zinc and copper after massaging the prostate and irrigating the urethra.

Atropine suppositories (1-75 gr. in each) twice daily.

Confirming the observations of others, the authors think it important for the prevention of epididymitis that the following precautions should be observed:

(a) The irrigator should not be more than five feet above the urethra; (b) the temperature of the irrigating or injection fluid should not be greatly above or below that of the body; (c) strongly irritating fluids should not be injected; and (d) the patient should rest in bed for the first week, and duty should be light till the discharge has ceased for a few weeks. Pack-drill immediately on leaving the hospital seems to be a very potent factor in producing epididymitis. It is worth while taking considerable pains to prevent epididymitis, since these cases are by far the most intractable gonococcus carriers and the most prone to relspse, so that they spend a considerably longer time in hospital than uncomplicated cases of gonorrhea.

Regarding the vaccine therapy of gonococcal infections, opinions are divided. Probably most workers agree that it is generally useful in the complications of gonorrhea, but few consider it of any value in gonorrheal urethritis. They believe that gonococcal vaccine may usefully be employed not only in the treatment of complications but in ordinary cases of gonorrhea. Considering the beneficial effect of vaccine on complications of gonorrhea it is reasonable to suppose that if the antigonococcal substances in the blood can be increased gonococci will be destroyed as soon as they come under their influence, and complications will be nipped in the bud. Further, in a patient whose resistance to the gonococcus has been raised the micro-organism cannot penetrate so deeply below the surface of the urethral mucous membrane as in other cases, since in doing so it would come within the sphere of influence of the blood. In other words, the inflammation would be a more superficial one.

In a series of cases in which they administered gonococcal vaccine with the object of preventing complications, the incidence of these was less than half the number which occurred in a similar series treated with vaccine. Incidentally it was also noted that the cases treated with vaccine did not suffer from periurethral thickening to the same extent as the others.

They believe that it is useful to continue vaccine treatment after the patient has left the hospital with a view of preventing relapses. Even failure to find gonococci after three tests is not a certain indication of complete absence. For this reason it is quite possible that all the cases of gonorrhea discharged from hospital are gonococcus carriers, hence they should be carefnlly watched for some weeks. Out of 115 patients discharged from hospital 91 attended for vaccine; of these two relapsed, both being men who had suffered from epididymitis, and one a patient who was specially discharged for private reasons before the inflammation had properly subsided. Out of 24 who could not attend, six relapsed, three being old epididymitis cases. It seemed, therefore, as if continued treatment with gonococcal vaccine had been beneficial in preventing relapses.

A Method of Fixing Dressings after Appendectomy by Deep Sutures.—Porter (Journal of the Royal Army Medical Corps) recommends the following method: Before sewing up the external oblique aponeurosis, four deep silkworm-gut sutures are inserted about ¼ inch from the edge of the skin incision. Numbers 1 and 4 pass through the tissues superficial to the external oblique. Numbers 2 and 3 pass through the skin and external oblique on one side, about ¾ inch from their cut edges, and taking up a little of the internal oblique muscle, pass through the external oblique and skin at corresponding points on the other side. The four sutures are most conveniently passed by meaus of a 4-inch straight Hagedorn needle. The ends of these sutures are collected and held by a Spencer Wells forceps on either side.

The edges of the cut external oblique are then united by a continuous thread, and the skin by interrupted silkworm-gut or Michel's clips. The area having been again painted with tr. iodi, a pad of about twenty thicknesses of gauze 1½ inches wide, and extending well beyond the last suture, is

held in position and the four sutures tied firmly over it.

No other dressing or bandage is applied.

At the end of forty-eight hours the exposed ends of the deep sutures near the skin are painted with tr. iodi and cut. The pad is peeled off in a line with the long axis of the wound, and the deep sutures withdrawn. They usually come out with the pad.

The exposed area is wiped with methylated spirit, and left without any protection. The sutures are removed on the seventh day, and the patient allowed up. No stitch abscesses have resulted, nor any infection of the wound.

The advantages of this method appear to be: (1) Great economy of dressings and bandages; (2) increased comfort to patients in hot climates owing to the absence of masses of cotton-wool and bandages; (3) absolute protection of the wound until it can safely be left exposed; (4) total occlusion of dead spaces in the operation area, and consequent limitation of exudation with diminished risk of suppuration.

High Blood-Pressure.—Osler (British Medical Journal) says the first thing is to determine the nature of the case, whether simple hypertension, arteriosclerosis, or chronic nephritis, or all combined. In the case of the active, driving business man, who has unconsciously damaged the machine, let him reduce the speed from the twenty-four knots of a Lusitania to the ten knots of the ocean tramp. It is interesting to note that the worry and apprehension associated with the first shock of the discovery that something is wrong may cause loss of weight, and with it reduction in the blood-pressure. A man of sixty-two, whose first indication of trouble was an attack of transient aphasia, lost two stone in weight in a year, and his blood-pressure sank from 220 to 150. He has been better since he has taken a philosophical view of the situation, and his blood-pressure has risen to 180.

The second thing is to lessen the intake. We all eat too much, and in no age was the saying more true that "the platter kills more than the sword." Time and again, Osler asserts, he has been impressed with this as a possible factor in obscure forms of hypertension and arteriosclerosis in persons otherwise temperate. Largely a matter of habit, the amount of food taken should be enough to keep the engines going at a steady speed. A diet of low protein content is best, and fairly large quantities of liquid should be taken.

Thirdly, elimination should be promoted in every way by making the action of the kidneys, bowels, and skin thoroughly efficient.

Fourthly, of drugs none are entirely satisfactory in chronic hypertension. Nitrites in various forms may be used, and are often of temporary benefit, but Osler thinks the general opinion now is that neither the nitrites nor potassium iodide are of permanent benefit; though now and again one meets with an instance in which the prolonged use of potassium iodide is followed by marked lowering of the pressure. A preparation of mistletoe has also been much lauded, but it, too, is very variable in its effects. Be careful on this point—if the patient does not feed so well, and begins to get thin and look badly, stop all drugs, trust to general measures, and let the pressure rise. In the robust man of full habit in the hypertensive crises with headaches, dyspnea, or angina, a free venesection is indicated, to be followed by mercurial and saline purges.

The Operative Treatment of Pott's Disease of the Spine.—Wilkie (Edinburgh Medical Journal) says that the treatment of Pott's disease has been rest and mechanical support for the diseased vertebral column. That this treatment is attended with much success none can deny, but that it still leaves much to be desired is equally certain. The conservative methods in common use, while they limit motion, do not secure absolute immobilization of the diseased joints, nor do they entirely relieve pressure on the involved vertebral bodies. Accordingly it is necessary to continue treatment for long periods of time, and in almost every case the deformity increases as the cure becomes complete; this is especially true with disease in the dorsal region. The method of forcibly correcting the deformity introduced by Calot has after an extensive trial been practically abandoned, for it has been abundantly demonstrated that the capacity for bone formation between the separated vertebral bodies is quite inadequate to fill the gap caused by straightening the spine.

During the past few years considerable attention has been directed to operative measures which have been designed for the double purpose of shortening the duration of treatment and preventing deformity.

All the operative methods which have been devised have been based on the fact that each vertebra is a lever, having a long arm, the laminæ and spinous process; a short arm, the body; and a fulcrum, the articular processes. If we immobilize the spinous processes and laminæ of adjacent vertebræ not only will the corresponding bodies be given absolute rest, but they will

be prevented from collapsing.

The first operation for the purpose was suggested by Hadra. He proposed to bind the spinous processes of the diseased and adjoining healthy vertebræ together with figure-of-eight turns of silver wire. More recently Lange recorded a very successful case in which he immobilized the diseased vertebræ by introducing through small incisions at either side of the spines, splints of tin-plated steel wire, which he attached to the spinous processes by silk ligatures.

In 1911 Hibbs described an operation in which the spines and laminæ themselves were used to produce a firm ankylosis of the posterior parts of the vertebræ. In Hibbs's operation an incision is made along the spinous processes, and the interspinous ligament is split and separated with the periosteum to either side. With a chisel the base of the spinous process of the sound vertebra above the diseased area is cut through, and this procedure is repeated on the spinous processes of the vertebræ involved by the disease, including finally that of the sound vertebra below. Each spinous process is then displaced and tilted downward, so that while a part of its base is still in apposition with the surface from which it has been displaced, its tip is brought into contact with the upper part of the area, from which the spinous process of the vertebra below has been separated. In addition, the periosteum of the laminæ is separated, and a small piece at the lower border of each lamina is chipped off and turned downward along with the loosened periosteum till it makes contact with the lamina below. The tissues are then sewed over the fragments. A steel brace is applied, and absolute rest in bed is continued for from eight to ten weeks. During the next few weeks sitting is permitted, and at the end of the twelfth week walking is allowed, the brace being worn for another month. In Hibbs's first case a radiogram taken three months after operation showed consolidation of the four spinous processes.

He further records 47 cases treated by this operation. Twenty of the patients had been going about without support for from three to twelve months, and had shown no symptoms of disease nor any increase in deformity. A rapid improvement in general health was observed in most cases, especially in those operated on early in the disease. The cases most suitable for operation are those in which the disease has not progressed so far as to have led to any marked degree of deformity.

The author says that Albee describes an operation which he performs for fixation of the diseased portion of the spine in Pott's disease. He transplants a long, bony splint from the shaft of the tibia, inserting and securing it in a furrow made by cleaving the spinous processes of the affected vertebræ and those of a healthy vertebra above and below them. He maintains that his operation has the advantage over that of Hibbs in that immediate immobilization is secured, and that as the long arms of the spinal levers—the spinous processes—are not broken across, greater purchase is obtained in preventing the collapse of the vertebral bodies. In a later report he states that he has performed this operation with success on 47 patients.

Whitman also records a case in which he applied two bony splints transplanted from the tibia along the sides of the spinous processes of the affected vertebræ in a case of Pott's disease. He considers that operative treatment is specially indicated in early cases of the disease in the thoracic region.

Nervous Diabetes.—Von Noorden (The British Medical Journal) discusses a case sent to him under a diagnosis of neurogenic diabetes. The patient was a man forty years of age, with a marked neuropathic family history. Two of his uncles had been diabetics. The patient himself had always been neurasthenical, the prominent symptoms being cardiac in early life and dyspeptic later. Four years ago he began to suffer, under stress of anxiety, from sleeplessness, loss of appetite and weight, and obstinate constipation. The urine was found to contain 1.5 per cent. of sugar. When under the Dr.'s care the patient's tolerance for carbohydrates was at first considerable; 180 grams (6.3 oz.) of bread daily only resulted on the eighth and ninth days in a slight degree of glycosuria, and this began to diminish on the first day on which the amount of bread was lessened, and soon disappeared. The patient did well, and put on 1 lb. in weight in a fortnight on a diet containing 60 grams of bread (2.1 oz.) Two facts came out as the case went on—first, that a sleepless night may in neuropathic diabetic patients give rise to glycosuria, which, within wide limits, is independent of food; and, secondly, that strong psychical irritation may cause a considerable output of sugar. In this case, as in many others observed by the author, sugar would appear in the urine during the day which followed a sleepless night, even though it might be absent from the urine passed in the early morning, while excitement and anxiety led to such a change in the condition that the patient, who had been tolerating 150 grams (5 oz.) of bread daily, began to pass sugar even after a complete withdrawal of carbohydrates. The nervous factor was undoubtedly stronger in

this case than the alimentary one, but, in spite of this, the Dr. did not regard it as a purely neurogenic case and one without risk of alimentary glycosuria in the future, both because there was undoubtedly a certain degree of alimentary tolerance and also because the fact that any excitement was repeatedly followed by the excretion of sugar, showed weakness of the physiological control over the sugar formation of the organism. Present-day knowledge points under such conditions to the presence of some insufficiency, however slight, on the part of the pancreas, and the author has seen true diabetes develop in a very large number of cases from a neurogenic diabetes. This proved to be a case in point. The patient returned to work on a modified diet, and when the urine, a year later, was examined by the family doctor and found to be free from sugar, the doctor recommended a return to a mixed diet. A little later, however, further symptoms developed, and finally, two or three years after the beginning of the first attack, the patient presented himself with all the signs and symptoms of true alimentary diabetes, in which the neurogenic element could no longer be demonstrated with certainty, while limitation of the carbohydrates now produced acetonuria.

Treatment of Dengue-Form Fever.—Kennedy, in the Indian Medical Gazette, gives his plan of treatment. Many of the cases reporting sick with this disease were found to have enlarged spleens, a legacy of old-standing malarial infection. From all these and from any other doubtful cases blood-smears were taken and sent for examination for the malarial parasite; they were subsequently put on quinine 10 grains, so as to be on the safe side. The quinine did not in any way shorten the fever.

Aspirin and phenacetine relieved the body pains and headache most effectively.

Liquor morphinæ in frequent small doses had to be given in one or two cases in which the former failed, or to control vomiting.

The routine treatment adopted was:

1. Initial purge.
2. Rest in bed with light diet.
3. Diaphoretic mixture and aspirin five grains every four hours, when pains were bad.
4. Tonic mixture during convalescence.

Suprarenal Gland in Dyspnea and Dropsy of Cardiac Origin.—Voigt (Brit. Med. Jour.) says that, aside from the established and customary drugs that are employed in dealing with failure of compensation in heart affections, suprarenal gland and its preparations can be relied upon in some instances. The solution of the extract of the gland may be administered, either hypodermically or intravenously, or the gland substance may be given by the mouth in tablet form.

He has treated with this drug several patients having cardiac trouble in whom dyspnea and dropsy were prominent symptoms. In all cases the dyspnea was relieved more or less, sometimes by a hypodermic injection of from 5, 10 or 15 minims of a 1:1000 adrenalin solution, at other times by 5 grains of the suprarenal gland substance administered by the mouth.

In the first case, the urine increased, during six days of suprarenal treatment, from 26 ounces, to 37, 49, 51, 111, and 125 ounces. At a later period the urine had again become very scanty, measuring on one day only 18 ounces. Adrenalin was then given subcutaneously three times and continued during the following day, without diminishing the salt in the diet, with the result that the next day 20 ounces of urine were voided, and, on the three following days, 43, 116, and 102 ounces, respectively.

In another case, where the patient could not be brought to limit herself to the salt-free diet or to an exclusive milk diet, ordinary diet was continued and two hypodermic injections of 7 to 10 minims each of adrenalin, 1:1000, were given daily. In this case the 24-hour amount of urine increased, from 29 ounces, to 37, 49, 76, 74, and 93 ounces. After this the amount of adrenalin was diminished and the treatment continued for a few days longer, with the result that all dropsical swelling that had been present disappeared. The albumin disappeared from the urine, which was secreted in large amounts.

A Case of Heart Weakness Treated with Cane-Sugar.—Dingle (The British Medical Journal) reports a case of failing heart in a plumber, aged 28, which followed upon severe exertion several months previously and probably involved damage to the mitral valve.

The heart action was suggestive of some irregularity in the aortic valves. It was rapid, irregular, intermittent. There was decided ascites and some edema of the skin over the lower abdomen. The urine showed no albumin. Rest in bed, together with nourishing diet, tincture of digitalis, tincture of nux vomica, and magnesium sulphate failed to improve matters, nor did any modification of the drug treatment do so. The patient's condition became much aggravated, although very occasionally he seemed to be improving. The ascitic fluid was drawn several times.

Seven months after the patient had pre-

sented himself for treatment, and a little over one year after the first injury, the doctor commenced the sugar treatment, ordering the patient to take 5 ounces of Glebe's granulated cane-sugar during the day, continuing, however, with small doses of digitalis. A few days later, all medicines were discontinued, with the sole exception of occasional doses of magnesium sulphate and calomel. The sugar was continued, usually in the full amount of five ounces during the day. There was occasional nausea. After one week some subjective improvement was noticed, which became more decided in the course of another fortnight. The appetite was good, the ascitic fluid did not increase, and the heart sounds gradually became more regular and the pulse stronger.

With one slight relapse, due to a mental shock, the patient continued to improve steadily and was practically well in a little less than six months after the cane-sugar treatment was instituted. Only twice since beginning the sugar treatment had the patient taken any cardiac drug, and then only for a few days. He never again required tapping; and the author attributes his remarkable improvement solely to the cane-sugar.

Another important point which the author makes is, that before beginning with the sugar, the patient was forced to take aperients almost constantly, but hardly ever took any at the time of the report.

The Effect of Cane-Sugar on the Uterine Muscles.—Shaheen (The British Medical Journal) says that the action of cane-sugar of increasing the energy of the uterine contractions in labor has been made use of by French people in inducing an otherwise slack uterus to produce good effective labor pains. Sugar is given in solid form or in solution, and apparently with good results.

Referring to an Egyptian custom of giving infusion of caraway seeds well sweetened with sugar for at least one week after delivery, in order to hasten and increase the mammary flow and to bring about a speedy involution of the uterus, Shaheen holds that whatever good effect may be obtained from this medication is more due to the sugar than to the caraway seeds, and he suggests the employment of this home remedy in cases of subinvolution of the uterus when the administration of drugs may have some retarding influence on the mammary secretion.

The Treatment of Epilepsy.—Alexander (British Medical Journal) has this to say of medicinal treatment:

A long experience of the treatment of epilepsy convinces him that we cannot depend entirely on hygienic treatment of the disease. A carefully arranged medicinal treatment will increase the number of arrests of the fits in a very material degree. Potassium bromide he never uses as a routine treatment. It is a very necessary and powerful agent for crises, and we could not well do without it; but if constantly used in the large doses commonly prescribed, there is no doubt of its baneful influence on the mind and brain. The routine medicine at Maghull, where such is considered necessary, is borax and sodium bromide. The maximum dose of each is 20 grains three times a day given in barley water. They have tested most of the compounds of bromide that have been recommended, and they do not find any to come up to the success of their own mixture, supplemented as it is by a normal healthy life.

As a general rule the only part of the colony treatment that is understood and that can be carried out in private practice is the medicinal treatment. Relatives will attend to the distribution of medicine, but the other conditions, even when they are understood, which they often are not, cannot be carried out. And even the medicine, owing to many adverse influences, ceases to be given if the fits cease to occur. Again and again have private patients come back to Alexander after a long cessation of attacks, complaining that the fits had returned, and almost invariably he found that the administration of medicine had ceased or become so irregular as to be ineffective.

The operation of draining the cerebral edema or "fenestration of the dura mater" has been performed by the Dr. in a number of cases. The operation is undertaken in focal cases, and in such cases in which, as often happens, no tumor or gross lesion presents itself; he thinks the operation of fenestration should be performed wherever edema is present, and where from the absence of a lesion nothing else can be done.

The Dr.'s experience leads him to the conclusion that when the treatment of epilepsy is carried on as he has described above, the outlook of an epileptic will become much brighter and more hopeful than it has been in the past.

Iodine in Whooping-Cough.—Cavazzani (La Pediatria) says that iodine is a valuable drug in the treatment of whooping-cough. The value of iodine in tuberculosis and in various infective diseases has been recognized by many authors, and the present author speaks highly of its use in typhoid. It is contraindicated in acute infections—for example, pneumonia, acute

nephritis, measles, scarlatina, acute rheumatism, and influenza. In whooping cough it is said to diminish the attacks of whooping, to shorten the disease, and make it generally milder. During the last ten years, the author says, he has seen no severe case such as he used to see before he began the iodine treatment. It does not act as a direct specific. He administers the drug as follows: He dissolves the metallic iodine in KI and water in the proportion of 1 part of iodine to 15 parts each of KI and water. Of this mixture he gives 4 to 6 drops per diem in sweetened milk to a child of one year, increasing up to 10 to 15 drops in children over five years. Given in this way, he has not observed any intolerance. It does not matter in what stage of the disease it is given. Apparently, in addition, he sometimes gives quinine or camphor monobromide.—British Medical Journal.

Cocaine Poisoning.—Bose (British Medical Journal) points out that the medicinal dose of the hydrochlorate of cocaine is 1-5 to 1-2 grain. The minimum fatal quantities on record are 2 3 grain hypodermically, 1.2 to 15 grains by the mouth, and 22 grains by rectal injection.

A few cases have been recorded in European practice in which the drug either proved fatal or produced very severe symptoms when it was injected hypodermically or passed into the natural cavities prior to a surgical operation, or administered internally. In one case the injection of 3½ grains into the breast of an adult woman was immediately followed by epileptiform convulsions, and in twenty minutes by death. In another instance the hypodermic use of 2 3 grain in a woman, aged seventy-one, proved fatal in five hours.

The prominent symptoms in all cases of poisoning consist of dryness and numbness of the mouth and throat, vertigo, dyspnea, failure of the special senses of sight, hearing, and smell; numbness of the extremities; rapid and feeble, sometimes irregular or intermittent pulse; muscular tremors, a staggering gait, dilated pupils; epileptiform, sometimes tetanoid convulsions; cyanosis, and insensibility.

The practical lesson to be learned from cases like these is the extreme care which is necessary in administering the drug for the production of local anesthesia in dental practice and surgical cases.

No case has yet been recorded Dr. Bose says of acute cocaine poisoning with a fatal result. In the twenty-seven years during which the Dr. has been connected with the Chemical Examiner's Department in Bengal, he has not had a single case of fatal cocaine poisoning referred to him, except three, all of which occurred within the past six months. Not only does this fact appear to indicate that the drug is very easily procurable by the common people, in spite of the strict regulations against it, but it also seems reasonable to infer that the people are getting to be more familiar with the uses to which the substance can be put.

Developmental Adhesions Affecting the Lower End of the Ileum and Colon.—Gray and Anderson (Edinburgh Medical Journal) discuss under this title the conditions variously termed (1) Lane's terminal ileal kink, described by Arbuthnot Lane, and regarded by him as an important feature of the conditions associated with intestinal stasis in its varied manifestations; (2) Jackson's membrane, the thin vascularized peritoneal membrane often found crossing the ascending colon, and binding down and kinking that portion of the intestine more or less firmly; (3) splenic kink or Payr's disease, due to a short phrenicocolic ligament, with adhesion between the transverse and descending colon; (4) lower sigmoid or mesosigmoid adhesions in the form of bands fixing the sigmoid or mesosigmoid to the left iliac fossa.

They believe that all these conditions have a common origin, in so far as they are primarily developmental, being due, as they put it, to "excess of physiological fusion," as the attachments of the various parts of the alimentary canal to the abdominal wall are formed during development. They reject Lane's view of their formation and the idea that they are primarily inflammatory in origin. They maintain that if Lane's view that the adhesions represent crystallization of lines of strain were correct, the adhesions should be found in the upper layers of the mesentery and mesosigmoid, on which strain would act most strongly. Further, in many cases the ileal membrane said by Lane to be due to the strain caused by a dropped cecum has been present where there was no ptosis of the cecum at all. They cannot accept the view often advanced that Jackson's pericolic membrane is inflammatory in origin, because of the astonishingly regular anatomical character of the best examples. The linear distribution of its vessels is quite unlike the radiating arrangement of the vessels in adhesions due to inflammation. The fact that many of the best marked cases have not been associated with symptoms, local or general, either as cause or effect, is regarded as additional evidence of their congenital origin, while the occurrence of several cases in children under five years of age lends additional support to this view. The writers regard Jackson's membrane simply as an

unusual arrangement of the right margin of the great omentum, with which it often has an uninterrupted connection. The view taken by the writers has much to support it, and certainly appears to give a much more rational explanation of the conditions named than the views advanced by others. An interesting suggestion made is that these adhesions or abnormal fusions have much to do with the production of visceroptosis.

In describing the symptoms produced in some cases by the adhesions the authors differentiate between those of a chronic and those of an acute type. The chronic symptoms are general and local, the general being those of autointoxication, staining of the skin, excessive sweating, enfeebled circulation with cold extremities, slightly swinging temperature, loss of flesh, dulling of mental faculties, headache, painful joints, cystic degeneration of the mammæ, which is liable to be followed by cancer; the local symptoms being a distended heavy feeling in the abdomen, with twinges of pain and borborygmi, relieved or intensified by changes of posture, and constipation in varying degree. A bismuth meal may be seen to be delayed or arrested where the adhesions are most marked. The acute symptoms are similar in character but more intense, pain of a dragging character, with colicky exacerbations and tenderness over the affected part, being present, while signs indicating complete intestinal obstruction may develop.

The Treatment by Emetine of Amebic Dysentery.—(Indian Medical Gazette) Rogers tables shows twenty-six consecutive cases treated in the same ward by his new plan of administering soluble salts of emetine hypodermically, or in a few of them by the mouth. They are classified in the same way as those in another table so as to be readily comparable. The first two patients were admitted in a hopeless condition and died under three days, gangrene of the cecum being found in the first case post mortem, although an extraordinary improvement in the stools had taken place within forty-eight hours and no amebæ could be found remaining in the bowel wall after death having apparently all been killed by the $3^1/_2$ grains of emetine hydrochloride he had received during life. In the cases of the next two patients the dysenteric symptoms cleared up completely within two days under emetine, but one European female died of heat-stroke some days after being convalescent of her dysentry, and the other, a very anemic and dropsical subject, developed cancrum ortis and died ten days after his dysentery was cured.

These two cases, then, are both remarkable examples of the rapid cure of dysentery by emetine in subjects who were so debilitated as to succumb shortly after to other diseases, and cannot fairly be treated as failures of the emetine treatment. All the remaining twenty-two cases have recovered—a remarkable testimony to the value of the new treatment, as they include a number of very severe and advanced cases, while no less than four of them showed a very high degree of leucocytosis, which has already been pointed out as being of most fatal import under the old methods of treatment. The only failures, therefore, have been in the two patients who were moribund on admission, while no case has been discharged "otherwise" at his own request while still uncured. As the emetine series also includes a fair number of chronic cases with dysentery of from one month to one year's duration, they are good samples of all types and stages of amebic colitis.

If we take the cases in which a cure was effected as judged by the final disappearance of blood and mucus from the stools, we find that the duration of the treatment with ipecacuanha varied between five and forty-four days, and averaged 11.4 days, during which periods from 140 to 1320 grains of the drug were taken, the average quantity being 406 grains. On the other hand, with the emetine treatment the stools finally became healthy in from one to four days, the average time being 2.3 days, while the quantity of emetine taken up to that time averaged 2 grains, and the total amount given while the patient remained in hospital of the ipecacuanha cases varied from seven to sixty days, the average being 16.4 days, while under emetine it lasted from five to eleven days and averaged 7. 2 days, which included one day during which they were kept under observation before the specific treatment was begun, unless the condition was an urgent one. It is preferable to keep the patients in longer, but when the dysenteric symptoms regularly disappear completely in two to four days and solid diet then begun causes no relapse, it is very difficult to persuade them to stay. Rogers asserts he has had a number of them return to see him after an interval, and so far no true relapse of amebic disease has come to his notice.

One patient of the above series did return and die of dysentery, but after death the upper part of the large bowel showed extensive scars of healed amebic ulcers, while the lower half revealed an acute bacillary dysentery from which Shiga bacilli were cultivated. In a second similar case in another ward pneumonia was found postmortem, together with paralytic dilatation of

the cecum and ascending colon, due to the extensive destruction of the muscular as well as the mucous coats, but only scars and no recent ulcers were present. Yet this man had only received three grains of emetine five weeks before his death, and he also had a small encysted liver abscess, free from both bacteria and amebae, and evidently beginning to dry up. These two cases of apparent relapse only proved that the former amebic disease had been completely eradicated, and indicate that about three grains of emetine had really completely sterilized all the tissues of the body as far as the ameba is concerned. If further experience confirms these results the emetine salts will constitute the most remarkable therapeutic remedy yet discovered.

The occasional failure of hypodermic injections of emetine salts in the case of very acute sloughing amebic dysentery dying within less than three days of admission led the Dr. to consider the possibility of giving the salt intravenously. In a recent very severe case with great thickening of the cecum and local peritonitis, he gave a dose of half a grain of the hydrochloride dissolved in five cubic centimeters of normal saline injected very slowly into an arm vein, watching the pulse carefully, and found it did not depress it in the least. In the evening he gave two-thirds of a grain in the same way, and on the following day a full grain, in addition to subcutaneous injections, and at the time of writing the local symptoms had much improved, the passage of sloughs had ceased, while the amebae disappeared from the stools within twenty-four hours of the first injection, and there is fair hope of his recovery. Whatever the ultimate result may be it is at least clear that very full doses of the drug may safely be injected intravenously, which is clearly the best plan in these desparate cases. There was no sickness or nausea after the last two large intravenous doses, but bilious vomiting both before and after the first one, so it is clear that the vomiting after ipecacuanha by the mouth is due to a local action on the stomach.

An Unusual Case of Enteric Fever.—Taylor, in The Indian Medical Gazette, mention this case:

R. G. was admitted to hospital at Miranshah on August 26th, 1910, on the tenth day of his illness. He had an acute attack with all the classical signs of enteric fever, hyperpyrexia, spots, hæmorrhages, meteorism, bronchitis and the typhoid state. This continued till the third week in September and was followed by a definite recrudescence ending about the middle of October but without acute symptoms. A small swelling containing a little fluid appeared on the surface of the tibia during this recrudescence. It was quiescent and was left alone. Then succeeded two and a half months of irregular fever without definite symptoms during which he put on flesh and was merely an interesting invalid. Late in December an acute relapse commenced with a typical ladder rise; spots and severe hæmorrhages followed but fortunately, this time, no meteorism. The temperature came down to normal at the end of January but before it had been down for fourteen days again commenced to rise in the evening; there then appeared œdema of both legs confined to the tibial area and as this subsided definite areas of periostitis were recognized. These were incised under chloroform but no pus was obtained—subsequently, however, pus appeared in other places on the tibiæ from time to time and continued to do so until early in March when the patient sailed for England. Widal's reaction early in the first attack was positive 1'160 to B. Typhosus, negative to Paratyphoids and again in the last attack in January was positive 1'40 partial 1'80 to B. Typhosus and negative to the Paratyphoids. A slide of the pus from a periosteal abscess in January showed no cocci or bacilli and later, plus plated, grew none. The original periosteal abscess which appeared in September was explored without success with a large needle on December 23rd. The temperature fell at once, but on the sixth day afterwards the last attack commenced. On the eighth day on opening the abscess about 20 minims of pus escaped. I cannot help thinking that the original periosteal abscess contained typhoid bacilli which had increased in virulence and that by pricking this abscess with the needle point I allowed them to escape into the circulation and so started a fresh attack. No other explanation seems to explain its origin satisfactorily. Another complication was the presence of a tapeworm, an old friend of nine years standing which even in health had resisted all efforts at displacing him. No segments were seen till November; from then till the middle of the last attack segments were passed; a large mass followed by a large hæmorrhage appeared on January 8th; the segments in this were very short and must have been very near the head, yet by February 17th mature segments were again being passed.

Altogether it was a strange case and presented many difficulties. The fact that we were 120 miles from a railway, and that there was no chain of bungalows on the road negatived any idea of moving for change of climate. My attempts at prognosis invariably met with repulses and after

a time I gave up trying. For the last fortnight's history I am indebted to Captain Chopping, R.A.M.C., to whose care the patient had been transferred.

Davison's Operation for Undescended Testicle.—Gessner (New Orleans Medical and Surgical Journal) says the technic is as follows: An incision is made as for inguinal hernia through skin and fascia; next, the external oblique aponeurosis is divided and the inguinal canal exposed. The testis and cord are freed from their fascial connections up to the internal ring; then the peritoneal process, if patulous, is identified and divided above the testis, the distal portion closed by suture to make a new tunica vaginalis, the proximal treated as an ordinary hernial sac. The special feature of the operation—the bringing down of the testis to lie in a pocket burrowed in the scrotal tissues—now remains to be accomplished. The epigastric vessels are sought and divided between two ligatures. The two sheets of fascia between which they lie are then divided from the internal ring to the spine of the pubes. There is now left a clear space between the transversalis fascia above (surrounding the peritoneal bag) and Poupart's ligament below. Here the component structures of the cord, vas on the one hand, spermatic vessels on the other, are freed from their fascial relations and brought in to the inner cornea of the wound. The vas is not at fault in cryptorchidism, being usually of ample length to permit the descent. The vessels, now relieved by the necessity of reaching the external ring by a circuitous route, including a double curve, are at this stage easily long enough to permit the testis to be drawn into the scrotal pouch. Here it is fixed by a suture, involving scrotum and tunica vaginalis. The conjoined tendon is next sutured to Poupart's ligament, leaving just enough room at the inner angle for the escape of the cord, and the external oblique aponeurosis sutured, preferably by imbrication, likewise with provision for the cord. Skin and fascia are sutured to complete the closure.

New Treatment of Gonorrhea in the Male.—Muller (Deuts. Zeit f. Chir.) mentions the irrationality of hoping to cure gonorrhea, or even to prevent an acute infection of the anterior urethra from spreading backward, by the present methods of injecting from the meatus inwards toward the bladder. The Dr. suggests a plan which, pursued vigorously for 1-3 days, will prevent the spread of the disease deeper, will kill the gonococci, and will mechanically wash them out. Under local anesthesia Muller inserts a Kuttner trocar into the distended bladder through a median puncture made just above the symphysis. Through the canula a soft rubber catheter 2½ mm. thick is introduced, and the canula withdrawn. The catheter is fastened to the abdominal wall and is connected with an irrigating system so that 100 c.c. of solution can pass into the bladder every five minutes from a height of 2 meters. Both a gonococcus-killing drug, such as a weak solution of argyrol, and an astringent, such as potassium permanganate (1:3000) should be used. From 200 to 300 c.c. are introduced at a time, the patient is then ordered to urinate, and the procedure repeated 20 to 30 times a day with 6 10 liters of fluid in all. As soon as the gonococci disappear from the urethra the catheter is removed.

Use of an Adhesive Mixture in Examining for Spermatozoa.—Solger (Dermatol. Zntrlbl.) has found that in examining old spermatic fluid for spermatozoa the latter may be washed away in the process of staining the preparation. The Dr. suggests that before staining the dry smear, the latter be coated with a mixture of collodion and ol. ricini, 2:1, as previously suggested by Strasser. The oil is then removed with alcohol and the latter washed off or simply allowed to evaporate. An examination of the unstained specimen should always be made first.

Syphilis and Pregnancy.—Mangiagalli (Rif. med.) raises some interesting questions in relation to the above subject. Clinically there are four possibilities: (1) Both parents may be syphilitic at the time of conception; (2) the mother alone may be affected; (3) the father alone; (4) the mother may become syphilitic after conception; both parents being previously healthy. The Wassermann test has shown that certain babies born healthy, but of a syphilitic mother, are really syphilitic although they show no symptoms of that disease. Undoubtedly many children escape, if infection of the mother occurs after the seventh month of pregnancy, but this is not due to any barrier-like action on the part of the placenta, but rather owing to the so-called period of second incubation; that is, the period between the primary and second manifestations. As in the case of the children, so in the case of the mothers, the Wassermann test has given positive results in asymptomatic cases of syphilis, which, but for this test, would be reckoned non-syphilitic, or at most, latent syphilitics. Possibly this explains some of the cases where an apparently non-syphilitic mother is immune when suckling her syphilitic child. Probably in rare instances, the father may transmit syphilis directly to the fetus.

Where both parents are syphilitic transmission occurs in about 68 per cent; if the mother only is affected the percentage is 60 per cent; if the father alone, the figures sink from 12 to 28 per cent. Length of time after the primary infection no doubt lessens the power of transmission, but this alone will not explain the difference between father and mother in the capacity to transmit the disease to their offspring. Possibly the much longer periods seen in women may be explained by the periodic discharge and prolonged retention of affected ova. A living child may be interpolated in a long series of abortions and with this exception the production of dead fetuses may still go on. Some special obstetric difficulties may arise if there is a syphilitic sclerosis of the cervix, and puerperal infection more readily occurs in syphilitic mothers. Obviously also the obstetrician runs special risks in delivery, both from the mother and from the child. When may a syphilitic marry? Certainly not when there are any active primary or secondary symptoms. Tertiary cases are as a rule not infectious, but this is not absolute, and especially in the case of women one should hesitate, as infection persists much longer in their case. Where the mother is apparently healthy, but the father syphilitic, he recommends anti-syphilitic treatment for the mother as well. He further advises an apparently non-syphilitic mother to nurse her syphilitic child, for as a rule she is immune. He favors direct anti-syphilitic treatment of the child and not trusting to treatment via the mother's milk, and the best form of treatment as a rule is by inunction. Only in cases where mercurial treatment fails would he advise salvarsan.

Treatment of Folliculitis and Sycosis by Radiotherapy.—Belot and Hadengue (Bull. et mem.) say that the x-rays are useful both in coccogenous sycosis and sycosis parasitica, the latter including favus of the beard, but they should be carefully combined with other physical and medicinal agents. Such is the conclusion formed by the authors in a communication to the Societe de Radiologie Medicale de Paris. The x-rays bring about a more or less perfect epilation, but although this epilating action is a capital factor in the treatment the authors think that account must also be taken of the general influence upon the affection, apart from the actual fall of the hair and expulsion of the parasite, although they are unable to explain exactly its effect upon the lesions. The subjective symptoms, such as pruritus and painful tension, are also relieved by the rays. In some well limited cases radiotherapy is enough in itself to bring about the cessation of the morbid phenomena, but generally its action should be seconded by medicaments and antiseptics. In cases of simple folliculitis, humid dressings may sufficiently soften the surface and prepare the way for x-ray action. A special emphasis is laid upon the necessity of making a careful examination of the nasal mucosa when a sycosis is situated on the upper lip. If this is not made there may be a relapse in spite of an immediately successful issue of the x-ray treatment. They employ fairly heavy doses (4 or 5 Holzknecht units) and when the region to be treated is placed 15 cm. from the anticathode, they obtain the epilatory dose in ten minutes. No part of the surface, however small, is submitted to two successive irradiations, owing to the fear of radiodermatitis or the setting up of a permanent alopecia. Humid dressings and antiseptics should be carefully applied after the irradiation and before the fall of the hair, but owing to the great sensitiveness of the irradiated surface, these applications should only be made under the supervision of the medical man. Medicinal applications should be suspended on the first appearance of the ordinary X-ray reaction, and of course, what is even more important, on the first sign of radio-dermatitis. Relapses are not very frequent. Among twenty-six observations tabulated by these authors there were only four instances of relapse. One of these was due to negligence on the part of the patient, and the other three were cases of sycosis of the moustache, in which possibly the nasal mucosa played an important, though a disregarded, part.

Salvarsan in Congenital Syphilis.—Welde (Jahrb. fur Kinderheilkunde) reports on the treatment of twenty-eight cases of congenital syphilis with salvarsan. Subcutaneous and intramuscular injections were given in the earlier cases, but on account of the painful infiltrations they gave rise to, intravenous injections were tried, not always successfully. The dose given was usually 0.1 gram, and in some cases two or three injections were given. The cases were of various degrees of severity, and included five older children with keratitis, gumma, etc. The general condition improved, and lesions of the skin and mucous membrane healed rapidly, but there was less effect on visceral and glandular affections. The Wassermann reaction only became negative in one case, but then positive again. A case of interstitial keratitis was improved after two subcutaneous injections of 0.15 and 0.1 gram, no bad effects were noted, and no deaths were attributed to the drug, although five children died a few weeks

after the injection from intercurrent affections. He concludes that good results were obtained, but not better than can be got by mercurial and iodide treatment.

Tuberculous Rheumatism.—Griffiths, in the Australasiaa Medical Gazette, says: "It is probable that many slight ill-defined ailments are due to a local unrecognized tuberculosis of the lung." Naturally, such ailments may continue after the pulmonary disease is manifest, though they seem then less prominent, and among them an important part is played by vague pains and aches which are appropriately described by the vague term "rheumatism."

These pains are important as being often among the earliest symptoms of pulmonary tuberculosis; they occur in the course of tuberculosis of other organs also. They are due to auto-tuberculization, that is, absorption of toxin from the tuberculous focus (Turban); they are, therefore, toxaemic in origin, and do not necessarily mean that the part in which they occur is infected with tubercle bacilli. Sometimes they are accompanied by other manifestations, e g., swelling and redness, "inflammatory tuberculosis" of Poncet, and in these intensified forms the causal agent may be not toxin only, but a living virus, tubercle bacilli of diminished virulence, or other bacteria.

The writer says that they occur in the shoulders, arms, back, hips, thighs, knees, and legs, and resemble those diffuse pains and aches so characteristic of influenza. During the reaction following an injection of tuberculin, they are aggravated. They are due to affections of muscles, fasciae, bones, bursae, even nerves, but, most of all, joints. The arthritic forms are the most important, and have been given the name, tuberculous toxaemic arthritis. They may be divided into three classes:

1. Arthralgia: fleeting pains in the joints without clinical signs. As Dr. Camac Wilkinson taught before 1905, a history of rheumatism may be obtained from the majority of patients with pulmonary tuberculosis; any physician who inquires of consumptives may readily confirm this.

2. Acute or sub acute arthritis, resembling rheumatic polyarthritis, and occasionally so severe as to be mistaken for acute rheumatic fever. These constitute a large part of the cases of rheumatism which do not yield to salicylates, and formerly led some writers to deny the specific action of salicyl preparations in rheumatism (Osler, 1898).

3. Chronic arthritis, resembling any of the different forms of chronic joint rheumatism. It is possible that Still's disease of joints belongs to this class.

Cases of the first class may later pass into the second, and finally into the third. Sometimes tubercle bacilli circulating in the blood may settle in the tissues already damaged by toxin, and so an ordinary tuberculous arthritis may result. Mild chronic forms affecting the acromio-clavicular articulation have a special interest for the physician; sometimes they cause crackles on movement (Perez' motor crackles), which may be mistaken for rales in the lung.

The diagnosis is extremely important, on account not only of the arthritis itself, but also of the primary lesion. When the patient is already known to have some tuberculous lesion, or where the family antecedents make tuberculosis likely, this condition should always be borne in mind. The acute attacks, which simulate rheumatic polyarthritis, differ from it in the following respects: (1) There is no primary angina; (2) profuse sweating is rare; (3) endocarditis is extremely rare; (4) relapses are very frequent; (5) salicylates have no therapeutic effect; (6) the reaction to tuberculin is positive.

The prognosis depends upon the amount of damage done and on the extent of the primary lesion. In any but very severe cases it is good.

The treatment is that of the tuberculous lesions; the pains rapidly disappear under the administration of tuberculin; rest, fresh air, etc., are also required; the local treatment is symptomatic.

The writer does not ascribe all pains occurring in the victims of pulmonary tuberculosis to this cause; apical and other pleurisies, dyspepsia, injury, strain, e.g., of the muscles by repeated coughing, all play their parts.

The description of tuberculous rheumatism we owe chiefly to Poncet and Schaefer. Few English authors have noticed it. I have published illustrative cases elsewhere (Studies in Pulmonary Tuberculosis, pp. 17, 21, 26-28). The following additional ones are typical:

1. Mrs. E. G., aged 22, November 14th, 1912, seen at the dispensary of the National Association for the Prevention and Cure of Consumption, gave a history of severe rheumatism in the arms and legs four years ago; blood-spitting three years ago, and now cough, wasting, loss of strength; her lungs exhibited the usual signs of phthisis; she re-acted to tuberculin.

2. Miss E. E., aged 16, November, 1912, Royal North Shore Hospital of Sydney, under the care of Dr. Bligh, with whom I saw her: appendicitis and peritonitis, which proved, on operation, to be tubercular; she had suffered a year previously from rheumatism in the arms and shoulders, which was

little, if at all, relieved by salicylates.

3. Miss M. F., aged 24, October, 1908: Pulmonary tuberculosis of second stage, also pain, swelling, grating, and stiffness of the right knee. After a month's rest in bed, and injections of tuberculin, the knee became very much better, and under further tuberculin treatment the signs completely disappeared, while the lesion in the lung healed, and in November, 1912, she was well and able to do heavy work, scrubbing and washing.

What bearing has this condition on our ideas of ordinary tubercular arthritis? It suggests that while 6 to 10 per cent. of cases of surgical tuberculosis in children may be due to bacilli of the typus bovinus (Osler), possibly received by ingestion, yet the remaining 90 to 94 per cent. are more probably secondary to unrecognized tuberculosis in the lungs or in the bronchial glands (v. Baumgarten, Holt, Woods Hutchinson). Some patients, especially children, with tuberculosis of the bones and joints, appear to be protected against phthisis, others again, especially adults, die of phthisis (Marsh, Cheyne). The explanation would seem to be that in the former cases the infection is of the bovine type, and so is mild and protective against the typus humanus (Raw. Marsh, p. 47, 62, Kossel. Weber), but in the latter cases the infection is of the typus humanus, and has spread to the bones from the lungs where it had first established itself.

He mentions intercostal neuralgia and severe premenstrual or menstrual pain as other manifestations of tuberculous toxaemia. So, too, inflammation of serous membranes, pleura, peritoneum, pericardium, may possibly be toxaemic; we may even have a tuberculous polyorromenitis.

He says the skin may exhibit symptoms dependent to some extent at least upon tuberculous toxaemia. Erythema nodosum, so often associated with rheumatism, and sub-acute purpura, have been described as occurring in close association with and possible dependence upon tuberculosis (Haushalter, Meara and Goodridge). I have seen one such case, Niss E., a young lady in advanced phthisis, August, 1911. She gave a history of "rheumatism" two years previously: subsequently, as her medical attendant informed me, she had peliosis rheumatica, but he and the consultant who first saw her with him had not been able to find physical signs in the chest.

Another skin disease which may possibly depend on a tuberculous affection of the ganglia of the posterior spinal nerve roots is herpes zoster, a number of cases of which I have seen occur in the course of chronic pulmonary tuberculosis. Curiously enough, one of the patients complained of severe "rheumatism of the side," but on stripping for examination disclosed typical zona.

After Poncet, I have called these various conditions "tuberculous rheumatism," the term "pseudo-rheumatism" seems superrogatory. I do not suggest that all cases of "rheumatism" are of this nature; no doubt many other causes contribute to that "olla podrida."

Note on the Wassermann Reaction in Lead Poisoning.—Gibson, in The Australasian Medical Gazette, says that in June, 1912, a girl of seven years was admitted to the Brisbane Hospital for Sick Children suffering from a typical attack of "plumbic ocular neuritis," which had unfortunately existed for at least two and a half months, and which had resulted in inability to count fingers for some weeks or more before admission. The attack was, however, still acute, with marked choked discs, and increased tension of intra-spinal fluid. There was a history of a previous attack of lead poisoning, affecting the arms and legs.

A lumbar puncture drew off nine drachms of fluid under greatly increased pressure, on admission. Prognosis regarding sight was bad, because the attack had lasted so long before the child was removed from its surroundings and treated. There did, however, appear to be some signs of improvement in sight at the end of a week. Five days after admission the child's blood, kindly examined by Dr. Sydney Page, gave a positive Wassermann reaction. I was reluctant to accept this as evidence of syphilis, although I did not then know that lead poisoning cases were said to return a positive Wassermann.

The writer says that he has always been particularly careful in cases attributable to lead to avoid mercury until the possibility of plumbism has been excluded, in case a second metal may intensify the toxic effects of the first. He delayed, therefore, for a week in following up the Wassermann by putting the child on mercury, and he did this in spite of the fact that cases of gummatous meningitis in children are the cases he has found to be most easily mistaken for cases of plumbic ocular neuritis. She was then put under inunction for five weeks, when it was stopped, as she had lost both flesh and color, and it became certain that any signs of regaining sight had quite disappeared. Soon after this I noted, in the Journal of Laryngology, an abstract of a paper read at the American Laryngological Society by Joseph C. Beck, of Chicago, on the "Wassermann Reaction and Salvarsan," in which it is stated that a positive

Wassermann occurs in lead poisoning (as well as in "recurrent fever, leprosy, measles, scarlet fever, pneumonia, framboesia, malaria, tumors, and cachexia!").

I was ashamed of myself for having failed to previously note this possible fallacy, but was unable to find any Brisbane colleague who knew of it. Lead poisoning is so common amongst children below the age of eight years in Queensland, on account of the fact that the lead paint used for painting verandrah rails comes off so easily when it becomes old and powdery, and is carried to the children's mouths when they bite their nails or suck their fingers. The fact, therefore, if substantiated, that lead poisoning cases give a positive Wassermann would greatly diminish the value of this reaction.

About this time a child admitted under the care of my colleague, Dr. Croll, with a typical acute attack of lead poisoning (wrist and foot drop) gave a markedly positive Wassermann. There were no manifestations of syphilis. Two other positive Wassermanns have since then been obtained in ordinary lead cases, and a very markedly positive one in a child with lobar pneumonia, and possessing a very marked blue line on her gums. I have previously pointed out that many children, especially amongst the families of those exhibiting symptoms of lead poisoning, show distinctive blue lines on their gums. Evidently this child had been ingesting lead, but the pneumonia alone would apparently have led the blood to give a positive reaction.

Jewesbury and Touley (Proceedings Royal Society of Medicine) have recently investigated the pathological changes in muscles in general diseases. They find in wasting disease varying degrees of histological change; such as alterations in the size, shape, and staining reactions of the fibers, increase in the nuclei, and of the interstitial tissue. In acute general diseases, these are slight, consisting of some granular, and hyaline, with sometimes fatty changes. In disorders associated with abnormal carbohydrate metabolism, there is a great increase in the interstitial fat; true fatty degeneration occurs in diphtheria, certain blood disorders, and in phosphorous poisoning, but is less common than is usually stated. Glycogen was only found strikingly present in those cases of diabetes examined. Amyloid change was not once found.

On the Influence of Salvarsan Treatment on the Wassermann Reaction.—Muller (Wiener Klin. Woch.) says that salvarsan therapy in cases with a negative Wassermann reaction offers greater probability of a cure than in those cases in which the serum reaction is already positive. This is especially true of the early or primary cases. According to the author, the use of the drug intravenously gives better results than the intragluteal method only in cases with a negative reaction. It is rather early to speak of a cure in the early cases, but the use of the drug intravenously in the primary stage with a negative reaction unquestionably has a marked effect on the further course of the disease. The following results were obtained in 114 cases of secondary syphilis: Of 85 cases that had as yet had no recurrences, the majority became negative within four to eight weeks after injection. Every case was at least affected by the treatment so that the reaction became weaker. More than half of the cases that it was possible to follow for a comparatively long period of time showed a return of the positive reaction within three to twelve months after injection. Of 59 recurrent cases in the secondary period a large percentage showed definite weakening of the reaction, and occasionally, though much less often in the recent cases without recurrence, a definite negative reaction in the fourth to eighth week. At the time of the recurrences most of the cases had a positive reaction again. In contrast to these weakenings of the reaction in the secondary period, such influence on the reaction in the tertiary period was much less frequently observed. In spite of the markeely rapid influence on the Wasserman reaction noted after treatment with salvarsan, the author warns against conclusions concerning the duration of this result.

The Biological Dilierential Diagnosis Between Leprosy and Tuberculosis.—Stein (Wiener Klin. Woch.) says that guinea pigs infected with tuberculosis when injected intraperitoneally with lepra bacilli obtained by dissolving "lepromata" in antiformin react similarly to pigs injected with tubercle bacilli, by the formation of an exudate rich in lymphocytes, containing very few polynuclears. While in pigs infected with tubercle bacilli it is impossible to find extracellular tubercle bacilli within a few hours, lepra bacilli may be found in large numbers outside of the cells. It would seem that the material which dissolves the extracellular tubercle bacilli does not affect the free-lying lepra organisms.

Further, it is not possible by the injection of masses of lepra bacilli and the exudate of pigs infected with tubercle bacilli to cause acute death in healthy pigs as was possible with tubercle bacilli to cause acute death in health.

Again, the organ-extract from "lepromata" obtained by extraction with antiformin when injected into normal pigs does not render the pig hypersensitive to a subsequent injection of tubercle bacilli, as would be the case if the juice from tubercular organs was first injected.

The positive outcome of the tuberculin rsaction in lepers is due to the coincident presence of tuberculosis.

Cardiolysis.—Simon (British Medical Journal) says that the selection of a suitable case for this treatment involves the greatest care and prolonged observation. It is difficult enough to diagnose an adherent pericardium when the fibrous bag is united inseparably to the serous covering of the heart muscle, but to feel sure that in addition there are external adhesions to the chest wall and to the diaphragm is a most serious problem. It is a difficulty that must be faced, however, or the operation will be discredited and possibly some lives sacrificed. Probably the best way to succeed in making a diagnosis is to determine if there is any way of explaining the increased size of the heart as due to any other cause than old pericarditis.

These cases occur almost entirely in young people at the time of development, in whom it has been known that they have been suffering from heart disease of some standing. Generally speaking, disease of the aortic valves, Bright's disease, and adherent pericarditis are the only causes of hypertrophy of the heart in children; it is fairly easy to satisfy oneself as to the existence of either of the first two causes, and so, by methods of exclusion, arriving at the diagnosis of old pericarditis. Chronic myocardial degeneration will cause dilatation of the heart and an increase in the area of precordial dulness, but it is rare in children; it may occur, but is seldom rapid in its course. Adhesions of the pericardial membranes must in course of time result in myocardial changes, but, as already stated, they are slow in development, and simple pericardial adhesions may, and often do, exist for many years without imperiling life; so, if in a youth we find a fairly sudden and rapid failure of heart power, and are able to exclude disease of the aortic valves as accounting for the hypertrophy, we are forced to consider the question of external adhesions.

We are helped materially by two very important observations—the nature of the impulse and the movements of the diaphragm. The latter can be observed in two ways—by radiography and by the movements of the abdominal wall. In inspiration the diaphragm descends, pushing before it the abdominal wall; if this movement does not occur, the inference is that the diaphragmatic contraction does not take place, because it is adherent to the pericardium, which maintains an almost constant position, owing to its relation to the root of the lungs and the aorta and pulmonary artery, though its junction to the central tendon of the diaphragm causes it to descend a little when the diaphragm descends.

The impulse in these cases is often very diffused, and the apex of the heart can generally be felt in the same position, not moving if the patient changes his position and lies on either side, the whole pericardium being anchored and fixed by adhesions. The limitation of diaphragmatic movement has a very important bearing on the liver. Physiologically, it is compressed by the descent of the diaphragm, and in its turn presses on the vena cava, so that the blood from the hepatic veins is pumped up through the inferior vena cava into the right auricle. If the diaphragm does not act, this free passage of blood does not take place; it is dammed up in the liver, which becomes swollen, and, as in one of Simon's cases, may be felt as low down as the umbilicus. If, therefore, in a patient who has been known or suspected to have adherent pericarditis we find such enlargement, and this is not due to cirrhosis, we may feel pretty confident that the diaphragm is adherent to the pericardium, especially if the diaphragm moves less than normally, and the anterior wall of the abdomen does not protrude with inspiration.

The vena cava passes between the right and central lobes of the central tendon of the diaphragm, and it is more than likely that its shape may be altered and its lumen diminished by an increase of the connective tissue of the tendon, due to inflammatory proliferation.

He expresses the hope that it may be possible, by means of removal of this pressure on the vena cava, to still further increase the relief that the present operation of cardiolysis has rendered. It would, of course, necessitate a second operation on the right side, and it may indeed be impossible, as the vena cava is deep in the thorax and has very intimate relations with the phrenic nerve. Billington has been kind enough the writer says to make a number of investigations on the relations of the inferior cava in the thorax, and finds that there is a very appreciable length of the vein, an inch or more, which is to be seen in the thorax between the points of piercing the diaphragm and entering the heart.

All the older text-books speak of the vein as passing through the diaphragm and entering the pericardium immediately. This

is certainly not the case, as the vein can be distinctly seen as stated for three-quarters of an inch before it pierces the pericardium; the rest of it, comprising about one-half inch, is within the pericardium and partially covered by the serous sac. The later textbooks speak of and illustrate this fact.

It is just this first part which may be affected by adhesions of the right pleura, which are very apt to occur in cases of anterior mediastinitis secondary to pleurisy or pericarditis. It is to the possibility of dealing with this condition that Simon ventures to draw the attention of surgeons. The vena cava, when it leaves the diaphragm, is extra-pericardial and is covered by fibrous tissue; what this fibrous covering is seems doubtful. It may be a derivative from the diaphragm or from the fibrous bag of the pericardium, or be independent of both. It is not covered by the pericardial serous sac until about one-half inch before it enters the right auricle. This three-quarters of an inch of vena cava, which has as yet no connection with the serous sac of the pericardium, is therefore very likely to be affected by any proliferation of connective tissue, such as occurs in mediastinitis; but it is equally obvious that adhesions of the two layers of the serous sac—namely, that overlying the heart muscle and that lining the fibrous bag of the pericardium—cannot affect this part at all.

It is possible, therefore, to understand why internal adhesions of the pericardium may occur without inducing any signs of pressure on the cava, such as obstruction to the entrance of the blood into the right auricle, and consequent increase in size of the liver. When such signs occur it would follow that we may assume that external adhesions have been formed. This interpretation, if correct, would explain why sometimes chronic pericarditis may exist for years without producing any symptoms until gradually those of progressive myocardial degeneration assert themselves, and, on the other hand, why very rapid signs of heart failure without general valvular lesions may probably be found to be dependent on external pericardial adhesions.

It is in this latter type of case that cardiolysis may be expected to yrove useful.

The anatomical conditions os the vena cava superior as regards its relation to the pericardium are exactly like those of the vena cava inferior, but the symptoms associated with pressure upon it will be those of delay of the venous circulation in the face and neck.

Cyanosis, which was so marked in one case, disappeared at once after the operation.

No attempt was made in his case to look for adhesions to the diaphragm or the veins, so it is clear that the beneficial result was due to the increased freedom of contraction of the ribs, and by separation of the adhesions between them and the pericardium.

Miscellaneous.

The Pituitary Body.

None of the ductless glands has attracted so much attention during the last few years as the pituitary body. Physiologists, pathologists, clinicians, and speculative philosophers have combined to investigate its condition in health and disease, each using his own methods of research, each attaining some measure of success in his conclusion. The amount of work done and the number of observations made have been great; still greater the number and variety of the highly speculative (and useless) theories developed to explain the possible actions of the internal secretion of the pituitary gland; yet the positive advance made in the comprehension of its place in the human economy is small; the number of undisputed facts known about its activity and influence is still smaller. The literature of the subject is enormous, and grows daily. We have before us two books, both excellent in their different styles, in which the slow growth of knowledge about the pituitary gland and the immense difficulties met with in its acquisition are clearly to be traced.

Delille first gives a straightforward account of much of the literature of the subject, the various researches on the actions of pituitary extracts, the conclusions drawn by the various writers; later he gives his own clinical experimental and pathological observations. He concluded—writing three years ago, it must be remembered—that the anterior lobe of the pituitary body was an activity secreting gland, though its extracts appeared to have no physiological action on injection or ingestion, and that the posterior or nervous lobe was devoid of all glandular infection, although its extracts had marked influences upon the heart and blood-vessels, the kidney, metabolism, and bodily growth. His account of the connection between the pituitary gland and acromegaly and gigantism was necessarily far from clear; for it was not at that time apparent that the hyperpituitarism producing giant wrowth or acromegaly might pass on into a stage of dyspituitarism or hypopituitarism—to use a barbarous but convenient terminology—in the course of time. Delille's clinical experience led him to conclude that pituitary extract should be given when it was desired to raise the blood

pressure and slow the heart or to proculdiuresis: it was particularly indicated in exophthalmic goitre and in cases of hypopituitarism.

Professor Cushing's far more ambitious essay is certainly the most complete and the most valuable contribution to the pathology of the pituitary body that has yet been made, and it defines with the utmost fairness and precision the point to which the physiologist and the pathologist have advanced in the definition of its functions, the recognition and treatment of its disorders. After a brief summary of the anatomy, physiology, pathology, and chemistry of the gland has been given, some two hundred pages are devoted to the detailed and well-illustrated study of forty-seven patients with pituitary disorders, all carefully detailed and discussed by Professor Cushing. About one hundred pages on the incidence, symptomatology, and treatment follow. The posterior or nervous lobe of the gland is described as made up of neuroglial fibers radiating from the infundibulum; in the space between the fibers are, sometimes, faintly eosinophile hyaline bodies "which seem to arise either as a form of secretion from the cells of the pars intermedia or as an actual metamorphosis of migrating epithelial cells." Cushing and Goetsch have claimed that the cerebrospinal fluid actually contains a substance with the properties of extracts of the posterior lobe itself. There seems no reason to doubt that the secretion gets into the ventricles through the infundibulum. Entering into the circulation in excess, this secretion produces glycogenolysis and glycosuria; but if its amount is diminished (as in hypopituritarism due to operation or disease) an abnormally high tolerance to sugar may be acquired, with the resultant accumulation of fat. The degree of this acquired tolerance may be of diagnostic utility, and certainly forms a basis for rational treatment with pituitary extract.

Professor Cushing gives a critical analysis of his cases, a lucid exposition of the considerations that lead to the placing of any one of his patients in the classes of past or present hypo-, dys-, or hyper-pituitarism His main interest would seem to lie in the clinical surgery of his cases, the indications for operative treatment, and the precise form that operative interference should take. Many of his conclusions are supported by the results of experiments upon dogs and puppies made by himself and his assistants. His remarks upon the connection between the pituitary body and the other ductless glands, hibernation, infantilism, precocious sexual development, diabetes insipidus, and countless other curious or unusual happenings in medicine, are often most interesting, and show a wise restraint in the use of the imaginative faculties that cannot be too warmly recommended to the attention of most of these who busy their pens on the subject of the hypophysis. In style and matter alike the work does the greatest credit to American surgery and experimental physiology. It should become a classic, and may be warmly recommended to all neurologists, surgeons, and clinicians.—British Medical Journal,

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The Elimination of Opium's Untoward Phenomena

Where it not for its several disagreeable features which are sufficiently weighty to make one hesitate before employing it opium, of course, would be the ideal analgesic. Unfortunately, however, long with its analgesic effects, opium exerts those well known phenomena which tend to limit its usefulness as a pain-relieving agent.

But with the discovery of processes by by which it is possible to eliminate the convulsive and narcotic principles of the drug, Papine (Battle) became possible, and with a wider therapeutic application than opium.

In the manufacture of Papine, the several objectionable qualities of opium have been eliminated, the finished product representing the analgesic and sedative properties only of this valuable drug.

In view of this, the superiority of Papine over opium and its alkaloids cannot be denied, for although offering to the patient the positive analgesic properties of opium it does not at the same time bind up his bowels or subject him to its other disagreeable effects. The utmost care is taken in the manufacture of Papine and it is fully believed that it offers every possible advantage over opium.

Hoppe, of the General City Hospital, Berlin, (Ber. Klin. Woch. 1912, No. 22) summing up the action of melubrin in the many cases in which he has used it, mostly acute articular rheumatism, says that as an antirheumatic it stands close to salicylic acid in efficiency, and is far more acceptable than that drug.

Loening, of Halle, (Munch. med. Woch. Nos. 9. 10 and 11) says: "Melubrin behaves as a specific in acute articular rheumatism. The remedy can even be given if endocarditis is present. It also gives positive results in chronic articular rheumatism, myositis, and sciatica. I have given over 45,000 grains of melubrin and have seen no failures."

Schrenk, of the University of Heidelberg (Deutsch. med. Woch. 1912, No. 34) after using 2,500 grams on 60 patients, reports that "We were able to confirm the observations of Loening that one can cure articular rheumatism without salicylic acid preparations. We hold this to represent a very essential advance in medicine, for not every patient can tolerate salicylates acid, and a substitute then becomes absolutely nesessary."

Treatment of Smallpox by Tincture of Iodine.

Pedley (Indian Medical Gazette) says while seldom having the chance of treating a case of smallpox. He had been on the lookout for an opportunity of using iodine, for he felt that its penetration of the thin covering of the vesicles would have the effect of destroying the activity of the microorganisms contained in their lymph.

On the first appearance of the spots he painted them whether they occurred with equal parts of tincture and liniment of iodine. After three days he changed this to the tincture alone, using it twice a day. The rash was profuse on the face, chest, arms, and hands. The patient found the application of the tincture cooling and grateful, and asked for it to be repeated. It was kept up for six days. The result was remarkable. There was no itching no discomfort, and no secondary fever whatever; the vesicle collapsed and shiveled; the cuticle peeling off left a clean, white surface, quite free from marks or scars.

He says that the course and severity of smallpox may be much modified by keeping down the fever by the thorough and continuous use of cold water, he feels sure that in the application of tincture of iodine we have a most valuable remedy.

Torticollis Following "Mumps" and Associated with Bilaterial Cervical Ribs.

—McGavin reports the case of a girl, aged eleven, who three months previously had an attack of "mumps," which lasted a fortnight and caused much swelling, not only over both parotids but "round the back of the neck." During resolution the patient's head began to assume its present position, the face being tilted upwards and rotated to the left. A skiagram showed a well-marked but short cervical rib on both sides; these, however give rise to no symptoms.—Proceedings of the Royal Society of Nedicine.

Vomiting due to Puerperal Retroversion of the Uterus.

Spelling, (Zentralblatt fur Gymakologie) reports the case of a woman twenty three years of age, who began to vomit severely at the end of the third month of pregnancy, This increased until about the fifth month, when spontaneous abortion occurred. The patient then recovered without complications, the vomiting decreasing, but not ceasing completely. Three or four months after the miscarriage the vomiting increased suddenly and became uncontrollable. Examination showed hyperinvolution and retroversion of the uterus. The organ was curetted, but no fetal tissue found. After the operation the vomiting ceased. Sperling concludes that this case indicates that the vomiting of pregnancy is not a manifestation of maternal intoxication by fetal material and that here it was more probably due to involvement of the sympathetic plexus setting up reflex disturbances.

In the same journal under date of January 18, 1913, Max Staltz in a thesis on Hyperemesis Gravidarum, states his conviction that the condition may be due largely to the irritation of nervous system. The Doctor reports two cases in which vomiting was eventually cotrolled by the continued administration of opium, enemas being used to keep the bowels open. In neither case did it become necessary to produce abortion, although such an outcome was feared.

Inhalations of Ozone in the Treatment of Diabetes.

Labbe and Perochon state that they have cured or have greatly improved a certain number of cases of diabetes by means of this method of treatment. The inhalations are given in daily seances of fifteen minutes each. It is supposed that oxygen in the naissant condition reestablishes the equilibruim between the production and the consumption of sugar in the organism.—La Press Medicale.

Action on Hydrogen Peroxide.

A chemically pure hydrogen peroxide, such as perhydrol is an invaluable agent in surgery since it has an elective action upon decomposition products without in any way interfering with living structures. Another great advantage lies in the fact that the resulting water and oxygen are absolutely indifferent to the tissues. Part of the action of perhydrol is mechanical, that is, the oxygen in its nascent stage will tend to free the tissues from bacteria and necrotic material much better than any process inherent to the body is able to do. Its chemical action is of no less importance, thus poisonous products of metabolism will be oxidized to the final stage so that much less irritant substances will result. A. Nagy (Alleg. Med. Central-Zeit., 1912, No. 35), points out that

one of the chief virtues of hydrogen peroxide is the complete absence of irritation, hence it is of the utmost importance always to employ a preparation free from acid.—Berl. Tieraerzt. Woch.

Intestinal Movements Under the Influence of Aperients.

Meyer-Betz and Gebhart have published in considerable detail the results of their investigations of the intestinal movements under the influence of various purgatives and aperients in healthy persons by means of x ray illumination (Munch. med. Woch., Aug. 13 and 20, 1912). They state that this work could scarcely have been carried out without the excellent observations of Magnus and Padtberg on the cat having preceded it. It is impossible in a short abstract to give the data which form the subject of the communication, but the reader who is interested in the same will be well advised to refer to the original article.

After describing the method of procedure, they give an account of typical experiments usually conducted on young patients whose digestive apparatus were natural. They divide these into four classes. In the first they deal with senna and aloes. The stomach and small intestine are not affected by these drugs. The action, limited to the large intestine, is not a stormy one, but consists of a combination of increased peristalsis with what has been termed by Schwarz as "small movements of the colon." The contents are well intermixed and the passage through the colon into the sigmoid flexure and rectum is a rapid one. Variations and minor points in the action of these two purgatives are both described in the text and illustrated by diagrams.

In the next class castor oil is dealt with. In this case, although vomiting was at times noticed, no increased peristalsis of the stomach could be detected. The action on the small intestine is best marked when the oil reaches the already full gut, and in the course of from three to four hours causes the whole contents to be thrown into the colon. The movements in the small intestine are partly rolling peristaltic movements and partly rhythmical segmentative movements. The mass reaching the colon remains practically fluid, and the normal real cecum movements are not observed. The haustra are not well marked and the intestine is filled with gas, probably from secretion. No "small colon movement" is present, and the discharge of the mass into the sigmoid and rectum takes place suddenly as the result of increased outward peristalsis.

The third group of purgatives, that of the drastics, is represented by jalap. The results obtained correspond to a great extent with Padtberg's colocynth experiments. The increased secretion in the small intestine leads to a complete filling of the gut. In about three hours the contents of the small intestine is discharged. The normal cecum activity is absent, and the rapid passage through the large intestine of the fluid motion is characterized by repeated filling and sudden emptying of the ampulla.

The fourth group is that of the salines. In this case the marked watery secretion of the intestine leads to an almost uniform passage of the fluid motion throughout the whole intestinal tract. The action is similar to that of jalap.

The authors further have investigated the action of calomel. This drug stimulates every segment of the intestine. In the small intestine rolling movements are produced, and while the secretion is not increased, the peristalsis often becomes stormy. This is best seen in the large intestine. They find that calomel is endowed with the power of emptying the intestines better than any other drug, and state that if it were not for the danger of an undesired absorption of the poison it would be the best and most searching purgative that we possess.—Brit. Med. Jour.

The Absorption of Digitoxin from Digitalis Preparations.

Gottlieb and Ogawa state that digitoxin, the most important principle in digitalis, is absorbed from the intestines and not the stomach. The absorption is a relatively slow process, usually not completed before 5 to 6 hours. Experimentally, it could be shown that this absorption is still further delayed where there is stasis in the portal circulation. Digitoxin is much more rapidly absorbed from digipuratum than from the powdered leaves. This explains why digipuratum often has a much more pronounced effect upon the action of the heart than the leaves, even if equivalent doses are employed. If vomiting or nausea occurs after the administration of some digitalis preparation, there may be one of two causes. The principles in the drug may directly irritate the stomach; in such cases the distress is noticed early, even after relatively small doses and is usually accompanied by salivation. The digitoxin is generally still in the stomach and is not absorbed. Or the vomiting may be true toxic effect of the drug seen after too much has been given. Here the symptoms usually appear after 6 to 7 hours. The appearance of vomiting during the first hour is an excellent test for the irritating properties of the preparation.

The authors find that digipuratum hardly ever gives rise to vomiting in cats, even if comparatively large doses are employed. The most rapid absorption was obtained with digipuratum in solution, then came the powder in suspension and then powdered and titrated digitalis leaves. The infusion was absorbed almost as well as the digipuratum solution, but remained in the stomach much longer and most readily gave rise to emesis. The conclusion arrived at is that digipuratum has least effect upon the gastro-intestinal tract.—Muench. med. Woch.

Treatment of Hepatic Congestion.

Vires writes that where hepatic congestion is the result of heart disease the first indication is to lower the venous blood-pressure by venesection, wet cupping or by drastic or saline cathartics. For the first six to twenty-four hours, according to the intensity of the symptoms, only boiled water should be given, then milk diluted with boiled water, and finally milk alone, to the amount of 1½ liters a day, gradually increased to 2½ liters. The administration of digitalis is started at the same time. Diuresis may be continued with doses of 7½ grains of neobromine three times a day. Copious intestinal irrigations with cold boiled water, alkalies, saline purgatives, cholagogues in small doses and tub baths followed by massage of the whole body may be given. Where there is cardiac enlargement digitalis may be replaced by the following combination:

Extr. Ergotæ.....	
Pulv. Scillæ.....	aa grn. jss
Hydrarg. Chloridi Mitis.....	grn. ¾
Pulv. Digitalis.....	grn. ⅜

M. et f. pil No. j. Ft. tal. No. xxv.

Sig.: One pill three times a day.—Jour. des Practiciens.

Thyroidin in Sterility.

Weil (Muench. med. Woch.) calls attention to the astonishing results of hormone physiology, pathology and therapy, and selects for special consideration the apparent correlation between the thyroid and ovary, which comprises not merely one but a series of possibilities some antagonistic, some complemental or synergistic. During menstruation and pregnancy the thyroid swells, while in castrates the latter organ may be seen to be atrophic. It occurred to the author to test thyroid preparations in primary sterility assumed to be due to ovarian insufficiency. A barren woman with simple goiter received thyroid preparations on general principles and in the course of two or three months became pregnant. He then exhibited the remedy to two other barren women who aside from a slight enlargement of the thyroid showed nothing to suggest a reason for failure to conceive. After several months, conception took place in both women. Of four pregnancies while taking thyroid two ended in abortion while one conception is recent and the only case which went to term required forceps. Whether these results are coincidences or indicate a general insufficiency for child bearing is not argued. There appears to be no doubt that the thyroid hormone artificially supplied determined a physiological congestion of the ovary which promoted conception. None of these women appeared to have had any trouble in connection with ovulation and menstruation, so that a rationale for conception is not accepted.

Local Anesthesia in the Pelvis.

Franke and Posner (Archiv f. klin. Chirurg.) describe a method successfully used in Wilm's clinic for producing analgesia for perineal prostatectomy, etc. Their plan, which was first worked out on the cadaver, using colored solutions, is as follows: A one per cent. novocaine solution without adrenalin is used. From a point 2 to 3 centimeters from the middle line, just in front of the anus, a needle 12 to 15 centimeters long is entered and pushed on in the long axis of the trunk, with the patient in the lithotomy position, till the resistance imparted by the levator ani muscle is felt. With a finger in the rectum the ischial spine is felt, and the needle pushed on under its guidance till it strikes the pelvic aspect of the ischial spine. By withdrawing the needle a little, depressing its point, and again pushing it on for 2 to 3 centimeters, it comes to lie just on the outer aspect of the ischial spine, and if 10 to 15 Cc. of solution are injected there, the internal pudic nerve will be paralyzed. This maneuver is repeated on the other side, and the needle is then pushed up in the middle line between the rectum and the prostate and 10 to 15 Cc. of solution distributed in the connective tissue between the base of the bladder, the prostate, and the rectum. As the needle travels to its various destinations small quantities of novocaine may be injected on the way. Finally, the subcutaneous tissue is infiltrated from the ischial tuberosity forward for 7 to 10 centimeters on each side. By this means analgesia of the lower rectum, the anus, perineum, scrotum, penis, urethra, bladder, and prostate can be attained, and is usually complete fifteen minutes after the injections have been made. The method has been used with success, more especially in doing perineal prostatectomy by Wilm's method. —Edinburgh Medical Journal.

Anesthetizing the Brachial Plexus.

Kulenkampff (Beitr z klin. Chirurg.) describes in detail the method adopted in Braun's clinic for producing analgesia in the distribution of the brachial plexus. In doing so he emphasizes the fact that it requires no very special knowledge to carry it out. With a little practice and attention to detail any one may get satisfactory results. The solution used is a 2 per cent. novocaine in saline, with three or four drops of a 1:1000 solution of suprarenin added to each ounce of novocaine solution made up. Of this 20 Cc. are injected. The syringe used should be fitted with an easily adapted needle 6 centimeters (2¼ inches) long.

In making the injection it is well to place the patient sitting upright on a chair, with a good support for the head, as the palpation of the parts and the direction of the needle can be better controlled in this position. The pulsating subclavian artery is first palpated above the clavicle and a cutaneous wheal of novocaine made immediately outside this—i.e., just above the middle of the clavicle. Light backward and inward pressure on this wheal reveals the resistance imparted by the first rib, and the cords of the plexus can often be felt on the rib under the finger. The needle is then entered through the wheal in the skin and pushed on toward the nerve cords as they lie on the rib. When the needle strikes one of the nerves a tingling sensation is felt in its distribution, and the syringe should then be carefully attached and the injection made. Twenty cubic centimeters should be injected and distributed directly in or on the nerves if success is to be obtained. If the cords are missed, as indicated by the absence of any radiating twinge as the needle travels, the needle should be gently and slightly moved backward and forward till a nerve is struck, for if injection is made without definite knowledge that it is in the right place, failure to produce analgesia is almost certain.

When the solution has been properly distributed, analgesia of the upper limb, up to a handbreadth above the elbow, follows in about eight to ten minutes and lasts one and a half to two hours. It is often accompanied by motor paralysis, complete or partial.

The results obtained in the first 100 cases in which the method was tried showed 77 successes, 4 complete failures, and 19 cases in which analgesia was not complete but sufficed for the performance of the operations done, except in a few cases in which a little ether was given to finish the operations. It should be noted that these results were obtained without the use of general sedatives, such as morphine, scopolamine, etc.—Edin. Med. Jour.

An Effective Remedy.

Bannerman Solution, when injected into the blood stream has a faculty of increasing the number of red blood cells.

Because of its influence upon the blood-forming organs this solution is of much value in the treatment of those cases in which an increased number of red cells and an increased resistance to disease is desired. Splendid results are being obtained in the treatment of anemia, tuberculosis, rheumatism, and many other common but resistant conditions. An interesting book, containing the formula and much convincing data, may be obtained on request free if The Charlotte Medical Journal is mentioned. Address William Bannerman & Co., 60 West Randolph Street, Chicago, U. S. A.

In the gastro-intestinal derangement of young children, as well as in anemia, loss of appetite, and to promote assimilation when the appetite is impaired, Elixir Malto-pepsine, (Tilden's), will be found of the highest efficiency.

A Curious Case of Mercurial Poisoning.

The circumstances attending the death of a child, which were revealed at an inquest recently held at Coventry, provide a useful lesson on the administration of drugs. The child suffered from ringworm, and the mother, after applying various remedies, consulted the family doctor, who supplied her with a solution of iodine, and gave her a prescription for ammoniated mercury ointment. The mother applied both the preparations to the child's head, with the result that the child suffered considerably, and died a few days afterwards from mercurial poisoning. The result of mixing the iodine solution and the mercurial ointment was the formation of the poisonous salt biniodide of mercury, which became absorbed. The doctor, in his evidence, said his instructions were that the iodine was to be painted on to the ringworm patch, and that on no account was the ointment to be put on the patch at the same time. The jury came to the conclusion that the mother had misunderstood the directions, but expressed the opinion that medical men should give more definite instructions as to the use of prescribed remedies.—The Hospital, London.

Pituitary Extract in Eclampsia.

That pituitary extract injections may be life-saving in eclampsia is very evident

from a case observed by Krakauer. When first seen, the patient was in deep coma and the slightest sensory disturbance provoked severe convulsions. Chloral and morphine were without the slightest effect, so that the patient had to be kept almost continuously under chloroform. The cervix was entirely closed, so that a catheter could be introduced only with the greatest difficulty. No labor pains appeared and hardly any dilatation of the os was apparent. Pituitary extract was then injected, and two hours later a fully developed dead child was expelled. The placenta soon followed spontaneously, and there was virtually no afterbleeding. The patient very soon regained consciousness and the albumin in the urine rapidly disappeared. The death of the child must be ascribed to the eclampsia and not to the drug injected.—Berl. Klin. Woch.

Treatment of Diabetic Acidosis.

In severe cases of diabetes with pronounced acidosis, M. Lauritzen advises a diet consisting of only small amounts of proteid (particularly vegetable proteid and egg albumin) in order to diminish the glycosuria. The carbohydrates necessary are derived from the vegetables and from fruits with small carbohydrate contents. From time to time a little flour and cream are permitted. The best fats to employ in these cases are washed butter, bacon and pork fat. Alcohol is to be preferred in the form of wines. Roasts or fish may be allowed sparingly if there is no increase in the percentage of sugar excreted. In the severest progressive cases large doses of sodium bicarbonate are necessary. An absolute milk diet or a mixed milk diet with vegetables and fruit may be tried. Sometimes the diet may consist only of vegetables, fruits poor in carbohydrates and cream with occasionally a day of only vegetables. An oatmeal cure may be effective, but should always be preceded and followed by a day of vegetables. In milder cases of acidosis the acetone will disappear spontaneously as soon as the sugar is reduced. The patient here should gradually be led to a strict diet with moderate amounts of proteid. Where the acetone persists, 5 to 15 Gm. sodium bicarbonate should be given daily. In every case where operation is intended the amount of bicarbonate taken should be increased and the patient should take vegetables only for a few days, so that the amount of sugar is reduced as much as possible and the urine is distinctly alkaline.—Therap. d. Gegenwart.

Treatment of Epigastric Hernia.

In mild cases of epigastric hernia, reduction with the application of an adhesive plaster dressing will generally suffice to bring about a cure. With severe pains or cough, morphine may be required. In the presence of hypersecretion, this should receive due consideration. Where the treatment is not successful, the patient should be operated, though recurrences have been observed in about 20 per cent. S. Wygodzinski has made the observation that in many cases of even large epigastric hernia operation is not necessary since Fibrolysin will promptly cure the condition without danger of recurrence. Thus, in one case quoted, one injection of 2.3 Cc. Fibrolysin was given every other day subcutaneously into the neighborhood of the hernia until the patient had received 20 injections. The effect was quite pronounced; the hernia promptly disappeared, the patient gained in weight and the marked hyperacidity of the stomach was corrected. There was also a favorable influence upon the bowels without after-effects of any kind.—Medico.

Narcophin, a New Morphine Compound.

Narcophin is the name given to the meconic acid salt of morphine and narcotine. For each molecule of the acid there are present one molecule of morphine and narcotine, and the amount of morphine present is 31.2 per cent. In order to increase the solubility of the preparation a slight excess of the acid has been added. Narcophin is a white, crystalline powder which dissolves slowly in cold water and more rapidly in hot. The resulting solution is clear and has a slightly bitter taste. According to Zehbe (Munch. Med. Woch., 1912, No. 28), the preparation is weaker in action than morphine, but can often be employed to advantage in place of the alkaloid. The pharmacodynamic effect of the narcotine contained in the opium has been carefully studied by Walter Straub. It increases the narcotic and toxic action of the morphine, but spares the respiratory center more. It seems that the advantages of opium over morphine are to be explained by the presence in the former of narcotine. Narcophin would thus be a preparation more potent than opium, yet possessed of the same advantages which this drug shows over morphine. Von Stalewski (Therap, der Gegenwart, Nov., 1912) states that narcophin possesses three advantages over morphine: it has a uniform composition, is more strongly narcotic and does not affect the respiratory centers. In one case of severe vascular neurosis the author found that the effect was not quite as prompt as with morphine, yet that Cheyne Stokes respiration and cyanosis did not occur as with morphine. Sleep was very quiet and there

were ns disagreeable after-effects upon awakening. Nacrophin is therefore indicated in all cases where the use of morphine is necessary for a long time. In cases of morphinism it is often possible to substitute this less dangerous drug. It also does good service in various painful conditions, such as colics, cardiospasm, labor pains, etc. The dose to be injected for adults is 0.03 Gm.

R. T. Jaschke has noted the favorable action of narcophin injections in obstetrics. After a dose of 0.03 Gm. an effect is generally seen in 10 minutes, and reaches its acme after two to three hours. An analgesic action is generally much more pronounced than a hypnotic one. The pulse and respiration of the patients were never influenced in any way, and the fetal heart sounds always remained satisfactory. The effect is always most marked during the first stage of labor; during the second stage there may be slight delay, which can easily be overcome by giving pituitary extract. No undesired after-effects, such as bleeding, could be attributed to the injection. The author decidedly prefers narcophin to morphine-scopolamine, but states that scopolamine may be added to the narcophin if desired. —Muench. Med. Woch.

Silicic Acid in Cancer.

In 1910 the author conducted experiments bearing on the action of silicic acid in mouse cancer, and observed that this compound exerted a preventive influence in the development of malignant growths in these animals. Silicic acid also has a favorable action on syphilis of the nervous system. The author advises its administration to prevent recurrences after operations for cancer. He prescribes the acid in daily doses of 0.01 to 0.02 Gm. (⅙ to ⅓ grain). In cases of cancer of the digestive apparatus, not more than a few milligrams should be given daily.—M. Benedikt, Society of Physicians of Vienna; Semaine medicale.

Treatment of Migraine.

Leopold Levi, in a paper read before the Societe de therapeutique, Paris, stated that he considered migraine to be due in many instances to disturbed function of the thyroid gland. Where the thyroid activity is deficient, the attacks appear at the time of the menses, in the presence of excessive thyroid function; on the other hand, they may occur at any time. A third, intermediate type, in which there is merely some perversion of the glandular secretion partakes of the characteristics of both the others. In the first type mentioned, thyroidin may be given in an initial dose of 0.1 gramme; in the second, 0.005 gramme, and in the third 0.025 gramme. The treatment should be kept up for twelve to eighteen months. The author presents numerous corroborative cases in which migraine had been absent for two or three years as a result of thyroid treatment.

There is also an ovarian form of migraine. This should be treated with ovarin in doses of 0.2 gramme twice a day, or with corpus luteum in 1.0 gramme doses, but the results are not as striking as with thyroidin. The latter will often lead to an unexpected recovery in cases where other drugs and correction of digestive disorders by a suitable diet have failed to bring relief.—Canadian Practitioner and Review.

Potassium Iodide an Antigalactogogue.

In the 1895 edition of "Materia Medica and Therapeutics," by Dr. J. Mitchell Bruce, the short statement is made that "Iodide of Potassium is said to act as an antigalactogogue." After seeing, during my student days, the troublesome and tedious methods used in maternity cases, in which, because of the death of the child or for some other reason, it had been necessary to arrest the secretion of milk, I determined to test the value of this statement at the earliest opportunity.

My first experience of its use was highly satisfactory, and I have now been using it for this purpose for about twelve years with complete success.

In a large majority of the three hundred odd cases, in which I have prescribed it, one dose has been sufficient to absolutely inhibit any further secretion of milk, while any discomfort present has usually disappeared in five or six hours. Occasionally a second dose is required, but only in one case have I had to exceed two doses; in that case it was necessary to give four doses on successive days.

My usual formula is as follows:

Potass Iodidi	gr. xxx-gr. xl.
Phenazoni	gr. x.
Spt. Ammon Aroma	dr. ½.
Syrupi	oz. ½.
Aquæ	ad oz. ii.

This is administered as one dose as soon as the breasts become swollen and painful. If necessary, the dose is to be repeated twenty-four or forty-eight hours later. The antipyrine is introduced in the prescription in order to counteract the marked tendency of the large dose of potassium iodide to cause headache.

The quantity of iodide administered is varied according to the general condition of the patient—a strong, plethoric woman

being given a larger dose than one who is weak and emaciated.

The advantage of this treatment is the absence of any necessity for restricting the patient's diet, for painful massage, painful bandaging, the use of hot applications or the ice-bag, liniments, dirty belladonna plasters, and the exhibition of anodynes and exhausting doses of saline cathartics. There is also to be considered the saving in time and labor on the part of the nurse; in the case of maternity hospitals this should be an item of some importance.

The disadvantages are nil. This treatment is equally successful in the later stages of lactation, when it becomes necessary to wean the child.—Hodgkinson, in the Australian Medical Gazette.

Inunction Treatment of Measles.

The following measures were employed by the author in a series of 160 cases of measles: A hot bath was first given, then a thorough application of eucalyptus oil made to the whole body, with the exception of the hands and the part of the face about the nose, mouth, and eyes. The mouth was irrigated twice daily with a weak alum lotion, and glycerin and borax applied to the interior of the mouth and to the gums. The throat (tonsils and fauces) was treated with phenol (1 to 10) morning and evening, using a firm mop of cotton-wool on the ends of a pair of forceps. Every day for the following four days the child was blanket-bathed morning and evening, and again rubbed over with eucalyptus oil, the throat and mouth having the same treatment as on admission.

In the cases thus treated, the total number of deaths was eight, giving a case-mortality of five per cent. Among 100 cases of measles previously treated without the inunction method the mortality had been 11 per cent. The children were from the poorest class of the community, prone to all kinds of infection, and having poor resisting powers. Even when serious complications were present, the treatment had a beneficial influence in the course of the disease.

The favorable effect of the treatment is mainly brought about, in the author's opinion, by the inhalation of the vapor of eucalyptus, and the local application to the mouth and fauces of antiseptics. The virus most probably attacks the air passages first, where also secondary infection is likely to arise. It is difficult to say how far the absorption of the eucalyptus via the skin plays any part in the curative value of the treatment.

Careful and constant nursing and maintenance of an even air temperature of 65° F. are very important accessory measures.

In the time of an epidemic in large institutions and hospitals, or even in their own homes when the children are excluded from school, they should be given the treatment for prophylactic purposes.—Connolly, in The London Practitioner.

Some Oddities in Nomenclature.

In the Section on the History of Medicine of the Royal Society of Medicine, B. Glanville Corney recently read a paper on this subject. He said that in Rio de Janeiro during the epidemics of influenza which occurred in 1777 and 1802-3 the disease was called "zamporinion" and "corcunda." He also cited an epidemic of dengue which ran through Brazil in 1847 and was called "polka" at Rio and "rabo aherto" at Bahia. The term "zamporinion" was adopted from the name of a Venetian singer who was popular at Rio at the time, and has nothing to do with the Portuguese name for measles, "sarampao"—in Spanish, "sarampion"—which is directly derived from the Greek, the bright color of the rash resembling that of a faded vine leaf. "Corcunda" means hunchbacked, and came into popular use because of the bent condition in which patients were left at the end of each paroxysm of cough, which was said to be of a very spasmodic character and closely to resemble whooping cough. Dengue was called "polka" because of a distinguished court beauty at Rio who was a native of Poland and was in great vogue at Bahia at the time of the epidemic. The same epidemic received the name "rabo aherto" because there chanced to be coincidently an unusual glut of the fish of that name. Glanville Corney advanced the theory that an epidemic of cerebrospinal meningitis was coincident with the Bahia epidemic and that whooping-cough played a part in the "corcunda" attack. He also alluded to the older folk names for influenza—namely, "le tac," "the new delight," and the "jolly rant," which have in turn displaced each other and have themselves been replaced by "the flue."—British Medical Journal.

Toxic Origin of Hyperemesis Gravidarum.

Seitz (Deut. Med. Woch.) considers that the main cause of hyperemesis gravidarum is a toxic condition similar to that which produces eclampsia and acute yellow atrophy of the liver, and that the part played by psychic conditions, and a host of local abnormalities—such as retroflexion, adhesions, erosions and endometritis—has been

much overrated. The teaching of the psychic origin of hyperemesis, which the Ahlfeld-Kaltenmach school defended, was based on the observation that treatment by suggestion effected improvement and even recovery in many cases. But this teaching, which labels the vomiting of pregnancy as a mere expression of hysteria, fails to explain its frequency in mentally robust women without a taint of hysteria or other allied condition. Besides, this complication occurs in every other pregnancy, and sometimes ends in death, which is an unknown sequel to hysteria alone. The psychic teaching was seriously challenged in 1892, when Lindemann demonstrated the gross anatomical lesions present in cases which terminated fatatly. Subsequently, English and American workers have recorded similar observations, and more recently Seitz attended a case which ended fatally in spite of the induction of abortion two days earlier. The necropsy showed that the organ most seriousiy involved was the liver, in which parenchymatous and fatty degeneration, and infiltration with necrosis of the hepatic cells, were observed. The kidneys also showed necrosis and changes characteristic of acute parenchymatous nephritis. Such changes, which must clearly be independent of purely nervous factors, resemble in many respects those which poisoning with phosphorus or chloroform causes. They also resemble the changes observed in acute yellow atrophy of the liver and eclampsia. Now, from one-third to a half of the number of patients suffering from the former disease are pregnant and their livers show marked diminution in volume and fatty degeneration or complete necrosis of the acini Both in this disease and in hyperemesis gravidarum there are cerebral disturbances, such as excitetion and delirium. Cutaneous haemorrhages and jaundice are also common to both, but while the latter is usually slight in hyperemesis gravidarum, it is, as a rule, severe in acute yellow atrophy of the liver. There may also be several other minor differences noticeable, yet the pathological changes are often so much alike in these diseases that they are scarcely distinguishable from each other. The number of cases of hyperemesis gravidarum which are so severe as to resemble cases of acute yellow atrophy of the liver are far commoner than the scanty observations on this matter would suggest. Hyperemesis gravidarum, again, resembles certain forms of eclampsia, with the severe forms of which slight jaundice is frequently associated. In eclampsia, too, the liver is often tender, the necropsy showing extensive hepatic disease. The association of hyperemesis gravidarum with such conditions as jaundice, haemoglobinaemia, neuritis, ptyalism, purpura, and small multiple haemorrhages into the tissues, is also indicative of a toxic state. Further, it is evident, if the fatal cases of hyperemesis gravidarum show extensive disease of the liver, kidneys and other organs, that the slighter forms are also accompanied by similar changes which are less marked, and from which the patient accordingly recovers. The writer points to the success achieved by the treatment of hyperemesis gravidarum with intravenous injections of serum drawn from healthy women, and he argues that this is a further proof of the toxic origin of the disease. He admits, however, that psychic influences may play a subsidiary part, and that treatment by suggestion may cure slight cases, for the sensitiveness of the vomiting center to suggestion can be demonstrated by provoking nausea with the aid of distasteful conversation. But psychic influences alone seldom or never cause hyperemesis in the violent form sometimes seen in pregnancy. As small quantities of apomorphine injected subcutaneously irritate the vomiting center, so do the unknown chemical bodies formed in the course of pregnancy, and in both cases the sensitiveness of the vomiting center is sufficiently increased for psychic and other minor factors to precipitate an attack of vomiting.—British Medical Journal.

The Therapy of Neurotic States.

The bromides have served no more useful purpose than in those unstable nervous states so frequently met with in women, and yet owing to this very instability their administration must be supervised with the greatest care if the patient is to be guarded from the disadvantages which accompany the use of these salts.

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The Treatment of Amenorrhea.

Fromme (Zentralbl. f. Gyn.) mentions the cases in which this condition is present for prolonged periods without pregnancy. Thus far the treatment in such instances has been unsatisfactory, and in view of a possible disturbance of the internal secretory glands being at the bottom of the amenorrhea, Fromme suggested injection of hypophyseal extract. The writer employed doses of 1 cc. daily until a result was obtained or the method was found without effect after several weeks' trial. Of twelve cases thus treated five were without result, two were doubtful and five reacted promptly. He says that those patients are most suitable for this treatment in whom a well-marked adiposity is present and in whom disturbances of the internal secretions are most likely. In view of the uncertainty of the effect of these substances its further recommendation must, however, be held in abeyance.

The Internal Secretion of the Corpus Luteum.

Kiutsi (Monatschr. f. Geb. u. Gynak.) has made use of a special method of isolating the specific tissue substances of this body by separating the yellow structure from the surrounding connecting tiesue and rubbing it up with sand and distilled water. The resulting mass was then extracted with salt solution and its coagulating effect on human blood studied. In every instance the coagulation of the latter was immediately hastened. Kiutsi believes that during normal ovulation the coagulation of the blood is favored by the luteum cells which are freed during the rupture of the Graafian follicle, it being possible that the substances enter the blood stream and bring about a cessation of the menstrual discharge. In studying the biology of the corpus luteum he considers necessary a complete isolation of this body from the surrounding tissue elements.

Etiology of Endemic Goitre.

McCarrison, in The London Lancet, says that the blood in goitre is characterized by a considerable lymphocytosis. This is present in simple as well as in exophthalmic goitre.

He then considers the pathologic changes which take place, summing them up as follws: The influences causing the goitre first stimulate the organ to increased activity, followed by damage to the secretory epithelium and later by degenerative changes. An enlarged goitre of this kind has always failed to show any traces of bacterial invasion.

The writer says that the thyroid gland in some way contributes to the body's antitoxic and anti-bacterial forces. He considers various methods of treatment, notably that of thyroid, with which he has had marked success, curing 68 out of 82 cases. He has gived thyroid in doses up to 10 grs. t. i. d.

With lactic acid bacilli in a few cases he has had good results. With vaccines made from colon and other organisms in the intestinal tract he has seen great improvement when used before degenerative changes have taken place.

The Dr. describes an elaborate investigation which at least suggests that certain amebae found in the feces may be the causative agent; he confirms this view by experiments, as the result of which he caused thyroid enlargement in goats by feeding them on water contaminated by feces from goitrous humans.

Repair of Urethro-vesico-vaginal Fistula.

De Rouville (Bulletin de la Soc. d'Obstet. et de Gynec. de Paris) recognizes the difficulty which the surgeon experiences in repairing a vesico-vaginal fistula which encroaches on the urethra. The Dr. describes how he endeavored to close two such fistulæ, each of which had developed in a young woman a few days after prolonged labor. The breach was of about the circumference of a sixpence, and the mucous membrane of the floor of the urethra, much hypertrophied, bulged over the anterior half of the fistula. The relations were thus rendered hard to define accurately, the mucosa forming a bar over the edge of the fistula anteriorly. He succeeded in dissecting the vagina and bladder apart over the posterior or upper part of the fistula, but as is always the case, the dissection could not be managed anteriorly. He therefore passed a sound into the bladder and made raw a large surface of the vaginal mucosa corresponding to the floor of the urethra. Then he endeavored to close the vesical border of the fistula with catgut. He succeeded in doing so, at least partially, in the first, but not in the second case. Then, in both, he proceeded to the next stage; the vaginal and vesical walls around the posterior limits of the fistula were dissected still farther apart. The vaginal flap was next drawn down and sutured in such a manner that its raw surface was placed in apposition with the vivified vaginal mucosa anteriorly. The first case healed after the first sitting, the second required three vivifications of the edge of an obstinate little fistula which developed at the most anterior part of the sutured flap.—British Medical Journal.

Uses of Blood Serum in Surgery.

Nolhia states that, as shown by Raymond Petit, blood serum need not have been freshly obtained when its curative effects in local inflammations are sought. The serum may be kept in aseptic ampoules or as a dry powder, the latter being diluted with ten parts of sterile saline solution for use. Petit advises the use of horse serum that has been heated to 56° C., certain noxious properties being removed by this process. In burns, after careful cleansing of the adjacent skin, the blebs should be aseptically opened, without removal of the epidermis, and the entire area washed with hydrogen dioxide solution, then with boiled saline solution. Sterile gauze, dipped in the heated horse serum, should then be applied, and the whole covered with a compress moistened with saline solution, an impervious dressing and cotton wool, rather loosely applied. The dressing should be renewed at first daily, then on alternate days. If the surface becomes macerated, the impervious covering should be left off, the surrounding skin anointed with a little sterile petrolatum, and dried serum used instead of the wet dressing. Rapid healing occurs under this treatment. In abdominal operations, especially in septic cases, from twenty to thirty c.c. of serum may be poured into the peritoneal cavity, before draining, with advantage. In puerperal infection, after the uterine cavity has been evacuated, washed, and dried, a piece of sterile gauze, the end of which has been folded around one gramme of dried serum, and the whole then dipped in the fluid serum, may be inserted into the uterus.—Semaine Medicale.

Glandular Disorders

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The Teaching of Eugenics in Schools.

Leslie argues strongly in favor of eugenic teaching for boys and girls, who would then be much less likely to grow up with false or perverted ideas of sex matters. He briefly discusses the four following questions: (1) Should there be preliminary teaching at home? (2) At what age should sex and eugenic teaching be given in schools? (3) What form should instruction take? (4) How should such instruction be given? He gives the following general principles for guidance in regard to the teaching of eugenics: (1) All teaching must be authoritative and given by qualified instructors of the same sex. Vague, amateurish teaching is not only useless, but may be positively dangerous. (2) Teaching should be given on a basis of perfect frankness. (3) The subject should be treated as both a serious and sacred matter. (4) Nature study of plant and animal life is the best introduction to the subject, followed by studies in physiology and persona hygiene. (5) The teaching is best given in small classes, supplemented by incidental and confidential talks with individual pupils as occasion arises. Confidence between teacher and pupil is to be encouraged in every way possible. (6) The teaching should as far as possible have due regard to the age, temperament and home environment of the pupil. (7) The personality of the teacher is every whit as important as his or her technical knowledge of the subject. (8) There should be encouragement of intellectual, emotional and social interests outside school work. This may be partly achieved by fostering a taste for the best in literature, art, music or science.—Jour. Royal Inst. Pub. Health.

Polycythemia.

Monroe and Teacher state that true polycythemia may be either symptomatic or primary. Symptomatic or secondary polycythemia is an erythrocytosis, analogous to a leucocytosis. It is met with in cases of chronic cyanosis associated with heart or lung disease, and it also is found in man and other animals living at high altitudes. This erythrocytosis is compensatory in its nature, and is attributable to stimulation of the bone marrow ny the deficiency of oxygen. Primary polycythemia or erythemia is analogous to leucemia, there being no

obvious reason why the bone marrow should show the excessive erythroblastic activity. It is known by a variety of names, including "Vaquez's disease," "Osler's disease," "splenomegalic polycythemia," "myelopathic polycythemia," "polycythemia with chronic cyanosis," and "erythrocytosis megalosplenica." These titles, however, are not all suitable, since cyanosis is absent in some cases, while in other cases there is little or no splenic enlargement. Whether the syndrome represents a single morbid entity, a disease sui generis, may be more definitely ascertained when a greater wealth of pathological and clinical material has accumulated, and the degree of affinity between the different types can be more precisely determined. The symptoms in the initial stage may be of a vague as well as varied character, and it is probable that the disorder of the blood may exist for a considerable time before it causes any grave or manifest disturbance of the general health. It is further probable that the disease would be found to be more common than is generally recognized if an examination of the blood were a more constant routine of clinical work.—British Medical Journal.

A Serous Cyst Evacuated from the Ramus of the Mandible.

McGavin reports the case of a man, aged thirty, in whom three years ago a swelling developed in the left parotid region; as it steadily increased in size it was incised. Nothing but blood was evacuated. The swelling was not painful, and after operation again increased in size. On examination the tumor was about the size of a tangerine, it was firm in consistency, and evidently deep to the masseter muscle. There was no facial paresis, although the tumor lay in the line of the facial nerve. In the center fluctuation could be felt; no bone cracking was detected. All the teeth of upper jaw except the wisdom tooth were present; this latter had been removed a year previously. Under chloroform an incision, following the angle of the jaw, was made, and a flap containing the masseter was turned up. The mass proved to be a cyst in the upper part of the ramus of the jaw, which was expanded to a thin shell, and contained clear yellow serous fluid. The lining membrane was removed. Microscopical examination gave no indication as to the nature of the cyst.—Proceedings of the Royal Society of Medicine.

Resection of Rectum for Cancer by the Vaginal Route.

Chalier and Perrin state that there were only two operative fatalities among the twenty-nine cases on record, including a case from their own practice. The immediate mortality was thus only 6.89 per cent., and as most of the operations date from before 1900, this mortality now would be much less. The ultimate outcome is known in only a few cases but two patients are known to be in good health after four years. Recurrence does not seem to be any more frequent than with other technics; only eight cases of recurrence are known in the twenty-two cases followed for some time. The great advantage of the method is that the anus is left intact and continence is certain if the innervation is not interfered with too seriously. Five illustrations show the various steps of the operation and the T incision, the long end carried into the perineum but slanting off below to spare the anus. Ample oversight is thus afforded. The cancer must be well defined, limited, not very adherent, and at an accessible point to be amenable to this technic, that is, in the ampulla or space just above. The indications for the transvaginal route are thus practically the same as for resection of the coccyx or sacrum or both in men.—Revue de Gynecologie.

Ehrmann, (Berl. Klin. Wochensch) in discussing the dieting and treatment of hyperchlorhydria says that a salt-poor diet, consisting chiefly of albumin and fat should be employed. Cream should be taken in preference to milk, which, though salt-poor, leads to the production of curdy masses and fatty acids in the stomach irritating the mucosa mechanically and chemically. Meat should be tender, and well pounded; there is no foundation for the belief that white meat is preferable to red meat in this condition. Raw eggs from their power of neutralising acid should be freely taken; whenever heartburn appears therefore two or three raw eggs should be swallowed in preference to taking bicarbonate of soda. Soft boiled eggs are not so easily borne nor so effective as raw eggs. Cheese, in form of cream cheese, and when salt-poor is specially recommended. Foods made from flour should be restricted as much as possible, since they not only strongly excite the flow of hydrochloric acid, but also lack in contradistinction to meat and eggs, the property of neutralising free acid. They should therefore only be taken in conjunction with eggs and with a large amount of unsalted butter and cream. While the eggs saturate the acid directly, the fats have the property of causing a back flow of alkaline pancreatic and intestinal juices, which further contribute to the neutralisation. Vegetables should be scalded two or three times with water, and the latter then

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throughly poured off, in order to eliminate the constituent substances, which stimulant the flow of gastric juices. Alcohol, which is a powerful stimulant to the gastric secretion, should be avoided. Medicinally, hyperacidity should be combated with extract of belladonna, given in pill form, gr. ¼ to ½, three times daily after food. The over-excited mucous membrane should receive direct treatment by means of some astringent remedy taken in a glassful of lukewarm water half an hour before meals. The addition of 20 to 30 grains of potassium bromide to each dose in cases of nervous patients will assist in the reduction of the excessive secretion. Four or five meals should be taken daily, unless gastric atony or a necessity for increasing the body

weight should require the taking of smaller meals at shorter intervals.

The Fourth Councilor District Medical Society of North Carolina.

This society is composed of the physicians of the following counties: Johnson, Wayne, Wilson, Greene, Nash, Edgecombe, Halifax and Northampton. This society has among its members the most prominent physicians in that district. The last meeting was held at Tarboro Tuesday evening, May 13th, 1913, at eight o'clock. Society was called to order by the president. Subject for discussion "Parasitic Diseases." The following papers were read:

"Diagnosis of Parasitic Diseases," by Dr. C. A. Shore. Raleigh; "Sprue and Amebiasis," by Dr. T. L. Ginn, Goldsboro; "Sequellæ of Hookworm Disease," by Dr. John A. Ferrell, Raleigh; "Parasitic Skin Diseases," by Dr. James J. Phillips, Tarboro; "Tapeworm Diseases," by Dr. G. S. Coleman, Kenly; "Roundworm Disease," by Dr. K. C. Moore, Wilson.

Officers of the association are as follows: Dr. Wm. H. Smith, Goldsboro, president; Dr. E. B. Quillen, Rocky Mount, first vice-president; Dr. Geo. D. Vick, Selma, second vice-president; Dr. M. M. Saliba, Wilson, secretary-treasurer; Dr. H. B. Best, Wilson, assistant secretary-treasurer.

Treatment of Glandular Tuberculosis.—Struthers Stewart (Journal of Vaccine Therapy) records his results in the treatment of 54 cases of tuberculosis of the glands of the neck with tuberculin. He always commences with the small dose, 1-200,000 mgm., increasing it gradually till a slight reaction is obtained, and the patient can stand 1-200 mgm. without any reaction. A successful result after six months' treatment must be regarded as a favorable case; with mixed infection the duration of treatment will be much longer. He prefers to deal with each organism separately; the administration of mixed vaccine has many disadvantages. It is impossible to say to which of the organisms the reaction is due, and therefore which should be increased, and there is less risk of development of hypersensitiveness to one or other of the vaccines. On the slightest sign of fluctuation, the glands should be removed; after excision of the glands, a course of tuberculin should be administered. This may be regarded as the ideal treatment. The worst treatment is merely to open a tubercular abscess resulting from the breaking down of a tubercular gland.

Braun (Deut. med. Wochen.) says that Lerda and Zuenn have been very successful in reducing and treating fractures without pain, by means of local anæsthesia with a one-half of one per cent. cocain solution. The Dr.'s own results in 50 cases of subcutaneous fractures and dislocations have been equally satisfactory. The writer's method consists in injecting a 1 per cent. novocain-suprarenin solution, the pain subsiding in a few minutes and remaining absent for a considerable time. In three cases of fracture of the radius where 10 ccm. of the anæsthetic solution were used reduction was unattended with the least pain, while in seven cases of fractures of the forearm the method of plexus anæsthesia produced complete muscular relaxation and loss of sensation. Backward dislocation of the forearm, as well as supracondylar fracture of the arm with dislocation, could be reduced without the least suffering. In fifteen cases of luxation of the shoulderjoint plexus anæsthesia was employed ten times and inter articular injection in five more recent cases. In making the latter 10 ccm. of the novocain-suprarenin solution were injected just beneath the acromion into the joint and another 10 ccm. down to the head of the humerus, which was located below the clavicle. The author reports favorable results in fractures of the ankle, leg and knee, and in dislocations at the hip joint. No deleterious effects were ever observed.

Appendicitis in Children.—Mitchell (British Journal of Children's Diseases) mentions forty cases, in which the initial treatment varied greatly. All were subjected to surgical treatment finally. The ages varied between 14 months and 13 years, the average duration of the illness being five days. Nausea and vomiting were not prominent symptoms, though abdominal tenderness and rigidity were present in every case at some time of the illness. A definite previous attack occurred in six cases, though there was a history of stomach in a much larger proportion. Four main groups were noted: (1) In nine cases a large walled-off abscess impinged directly on the abdominal wall. There were three deaths, due, respectively, to septic peritonitis, intestinal obstruction, and exhaustion. Of the recoveries five needed further operation for the removal of the appendix or cure of a ventral hernia. (2) Five cases showed localized abscess, only reached after opening the peritoneal cavity. One death occurred seven days after a second operation for subphrenic abscess. (3) Eighteen cases showed a spreading diffuse peritonitis, with gangrenous appendix in all but one case. Six deaths occurred—three within twenty-four hours of operation. Operation for ventral

hernia was needed in several of the recoveries. (4) Eight cases showed a gangrenous appendix without peritonitis. There were no deaths, and in these the average duration of illness before operation was under twenty-four hours. In all, there were 40 cases, with 10 deaths, a mortality of 25 per cent., while in all cases operated on during the acute stage before infection had visibly extended beyond the appendix and its peritoneum, the mortality was nil. A simple enema was given before operation, salines with glucose and bicarbonate of soda continuously every two or three hours for twenty-four hours after. The affected area was well packed off, free pus mopped away, the appendix removed, and drainage employed in all but one case. He concludes that appendicitis in children is a dangerous condition, and deceptive because the stage of the disease is hard to determine. Cases in the catarrhal stage often recover without operation, but after a certain point the disease advances rapidly and often kills. Localized abscess is very dangerous in infants especially. Children are bad subjects for acute septic peritoneal infections, owing to the high position of the appendix in the abdomen; peritonitis is often diffuse from the first. Early diagnosis is everything.

Prescribing Glasses for School Children.—Bradburne (British Medical Journal) says that, after the nature of the refraction has been ascertained by the mirror test, the question arises as to the standard of vision which would justify us in not ordering glasses. This question cannot be answered definitely, as so much depends upon the "status" of the child; if poor and likely to remain one of the laboring classes, a standard of as low as 6-12 vision might be allowed to pass unglassed, provided, of course, that the case be not one of short sight. If, however, a clerkship or similar calling form the future outlook, it would be necessary to raise the standard to at least 6-6 in one eye and 6-9 in the other.

Cases of astigmatism come under a different category; it is advisable to correct all cases in which the axis of the astigmatism in one or both eyes is oblique, or when it varies in direction in either eye, or when present in one eye and not in the other. The reason for this is the strain which oblique astigmatism makes on the obliques in the interests of binocular vision. Low degrees of astigmatism when at right angles would probably pass the test by the letters, and unless giving rise to symptoms need not be corrected. If symptoms arise they must not be sought for in the eyes alone, but in the effects on the general health and the progress which the child makes at his lessons. A weak, anemic child, or a mentally backward one, becomes wonderfully transformed when small degrees of astigmatism are properly corrected.

Every short-sighted case requires to be fully corrected, and, what is still more important, should be examined again in six months' time to ascertain if the case be progressing. If no change be found at the re-examination, the next need only be after

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an interval of twelve months, which should be repeated yearly for at least three years. Any alteration calls for re examination in six months. The prescribing of glasses does not end the management of these cases; it is the duty of the inspector to see for himself that the position of the child's desk is at a proper height, that the light is good, the print of the books large and clear, and the general health of each child should be made the special care of the family medical attendant.

The Dr. says that the management of eye cases under the Act consists in detection of visual defects and the adoption of appropriate measures for their rectification. This does not entail, as some authorities seem to think, the right to treat themselves, or, on the other hand, to flood the out-patient department of the hospitals. Many authorities now are adopting the intermediate and wiser plan of employing a part-time specialist, leaving those requiring hospital treatment to attend such places, and placing the simpler cases under the management of the inspectors themselves to deal with. It is this latter aspect of the case which requires consideration—that is, how far is the medical inspector justified in undertaking the treatment of the eye cases he meets with?

Pernicious Vomiting of Pregnancy.—Williams (Glasgow Medical Journal) presents the following conclusions:

1. The underlying factor in all cases of vomiting of pregnancy is probably an imperfect reaction on the part of the mother to the growing ovum.

2. In most cases this is only a predisposing cause, while a reflex or neurotic influence is the exciting factor, and cure usually follows its removal.

3. Williams still holds to the classification of reflex, neurotic and toxemic vomiting. Of these the neurotic is the most and the reflex the least frequent type, while the toxemic is the most serious.

4. Pronounced toxemic vomiting is accompanied by characteristic lesions and profound changes in metabolism.

5. The significance of a high ammonia coefficient is not specific. It may be a manifestation of toxemic vomiting, of starvation following neurotic vomiting, or of an acidosis due to various causes.

6. It should be regarded merely as a danger signal, while the differentiation between the various types is possible only after careful clinical observation: If improvement does not promptly follow appropriate treatment, the existence of toxemic vomiting should be assumed and abortion promptly induced.

7. In the absence of genital lesions, a low ammonia coefficient indicates neurotic vomiting, which can be cured by suggestion and dietetic treatment, no matter how ill the patient may appear.

8. In primiparous women vaginal hysterotomy is the most conservative method of emptying the uterus. Nitrous oxide gas or ether should be used in preference to chloroform for anesthesia.

The Real Value of Nutritive Enema.

M. Ramon Oppelt Sans (La valeur reelle des lavements alimentaires intestinaux). Is it possible to nourish a patient with stricture of the esophagus or cancer of the stomach by nutritive enema and how long can we sustain life by this method? After recalling the experiments on absorpton by the large intestine of water, crystaloids, nitrogenous bodies, sugar, and amids, the author cites the work of Diena, who under the direction of Prof. Morpurgo, has shown the influence of the molecular concentration of solutions of sodium chloride, glucose and urea on intestinal absorption. The conclusion of all this work is that it is impossible to sustain a patient by this method exclusively longer than eight to ten days. After this time the patient begins to show the evidence of intolerance and inanition. On account of these results the author has thought to employ the hypodermic method to feed this class of patients. He employs sterilized oil of sesame, injecting 30, 50 or 100 grams, according to the case, into the gluteal region. This produces a slight raise of temperature which falls in about six hours: Fat embolism or any other accident has not been observed or met. These injections are repeated every second day and the amount increased or diminished according to the result. The author has in this manner supported many cases for six, eight, or ten weeks by this method alone.—Gazette Medicale de Paris.

Intraperitoneal Application of Oil.

Momburg, on a basis of personal experience, would warn others from further application of oil in the peritoneal cavity. Oil injections in every kind of application are prejudicially to the organism, and in weakened individuals may exert a critical action. The good results are problematical and cannot offset the injury done. The author would anoint the site of the incision in order to guard against possible soiling by stomach or intestinal contents. In order to prevent postoperative peritonitis we have other and safer resources such as the hot-air chest.—Deutsche medizinische Wochenschrift.

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Treatment of Chancroidal Lymphadenitis.—Henken (Semaine medicale) gives the following method and says it is promptly effective in the inguinal glandular enlargements accompanying chancroid: After appropriate general toilet and disinfection of the affected area, an incision, from one to 1.5 centimetre long, is made at the point of greatest fluctuation. A Bier cup is then applied, and allowed to remain ten or fifteen minutes. Next a twenty per cent. iodoform emulsion in glycerin, well stirred, is introduced into the abscess cavity in sufficient amount to fill it. Finally, the incision is occluded for five minutes by means of cotton dipped in mercury bichloride solution, in order that the emulsion may penetrate to the farthest recesses of the cavity, and a wet, non-occlusive dressing is then applied. This procedure is carried out three times, on successive days. On and after the fourth day, when the discharge is already greatly reduced in amount and is losing its purulent character, the treatment is limited to the application of the Bier cup and the insertion of a gauze wick. The cupping is continued until the seventh or eighth day, even if there is no discharge. On the ninth day, recovery is complete.

The only disadvantage of the method is that fever and local pain occur three or four hours after the first iodoform injection. By the next morning, however, this has all subsided, and the total amount of inconvenience is far less than in cases treated by wide incision and packing with gauze, in which, moreover, according to the author, the average period required for a cure is forty-one days.

Interesting Clinical Work.

By John Christie, M.D., Stayner, Ont., Can.

I have used Bannerman's Solution for two years, always with definite and rapid increase of hemoglobin, never with any bad or troublesome results. Following is a report of a case of phthisis treated by Bannerman's Intravenous Solution:

R. R., age 45, male, farmer. In April, 1911, treated him for pleurisy, without effusion. In July, 1911, another attack of pleurisy, which I treated for two weeks and then diagnosed phthisis, affecting lower lobe of left lung posteriorly. Sputum examination showed tubercle bacilli very numerous. Condition of patient at this time was as follows:

Cough.—Very troublesome.

Expectoration.—Plentiful; half-pint or more a day; offensive odor.

Weight.—Rapidly falling. Later, after some gain, was 100 pounds.

Temperature.—100 to 103.

Pulse.—100 to 140 Night sweats.

He was treated in usual way until September 5th. Had bed on verandah, which he never left. Appetite could not be improved. All symptoms and signs getting worse. I judged at this time he would not live more than a few months.

Sept. 5.—Given 8 cc. Bannerman's Intravenous Solution in median cephalic vein.

Sept. 12.—Temperature 100 in the evening. Cough less. Expectoration less. 10 cc. solution given.

Sept. 19.—Temperature normal; pulse slower. Cough and expectoration very much less. Had been up and about the lawn during previous week. Appetite improved.

Oct. 4.—Temperature normal, and had been so continuously since last treatment. Pulse 100. Cough and expectoration very much less than previous week. Appetite voracious; has been eating everything brought to him, and as often as it was offered. Gain during previous week one pound a day. Looks well and feels well. 10 cc. Bannerman's Solution given.

Oct. 18.—Weight now 145 pounds. His usual weight. Temperature normal always. Patient up nearly all day. Eating and sleeping well. Very little cough or expectoration. Physical signs till present, but symptoms have all disappeared except rapid heart. This persisted until the spring of 1912.

During summer and harvest of 1912 he did his usual work on the farm, and now appears to be perfectly healthy.

Five treatments in all were given.

There is absolutely no doubt as to cause of his rapid recovery.—From the May, 1913, issue of the Canadian Journal of Medicine and Surgery.

Cod Liver Oil in Bronchial Inflammation.

The great value of cod liver oil in chronic bronchial inflammations is so thoroughly accepted by the profession that the only question which ever arises in regard to its use, is the form in which it may be best exhibited. In regard to a suitable form for administration, the great difficulty has been to secure palatability without loss of therapeutic power. Cord. Ext. Ol. Morrhuæ Comp. (Hagee) combines these two requisites, as a result of which advantage it has secured the support of a large proportion of the profession.

In the bronchial ailments of young patients especially, it will be found a most satisfactory agent.

The Sweat of the Tuberculous.

The question as to the possibility of infection from the sweat of a consumptive has often been discussed, but little scientific evidence has ever been brought forward to prove that any real danger exists from this source. It has been recently reported, however, that M. Piery has established the presence of the tubercle bacillus in the sweat of every patient with consumption that he has examined, and that inoculation experiments with guinea pigs have yielded positive results. If these observations are confirmed, a fresh avenue of infection may be looked for, and it is possible that by this means may be explained the frequent and well authenticated cases of the communication of the disease by a person attacked by it to another, with no hereditary liability to infection, who is brought into frequent contact with the patient, as in the instances of husband and wife, nurse and invalid, and the like. M. Piery recommends, therefore, the careful disinfection of all garments, bed-clothing, and so on, used by a tuberculous patient, and his or her isolation as far as possible, especially at night time.—The Medical Press, London.

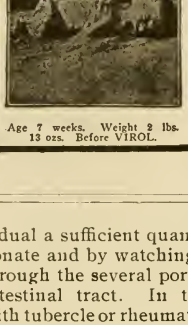
Chronic Intestinal Stasis.

It is only the other day that most of the leading physicians in Great Britain scoffed at intestinal stasis and autointoxication as important factors in the production of disease. I believe it to be the prime factor in very many diseased conditions. By chronic intestinal stasis I mean such an abnormal delay in the transmission of the intestinal contents through some portion or portions of the gastrointestinal tract as results in the absorption into the system of a greater quantity of toxic material than the organism is able to deal with effectively by means of the organs whose business it is to eliminate it,

Take, for instance, tubercle and rheumatoid arthritis. Now in my experience a patient cannot develop either of these diseases (except in the case of tubercle by inoculation) unless the resisting power to the entry of organisms, or in other words the vitality of the body, has been depreciated by the poisons which circulate through them in chronic intestinal stasis.

The actual existence of chronic intestinal stasis can be demonstrated beyond question and gauged accurately by giving the indi-

The Nutrient Value of VIROL illustrated in a remarkable case, particulars of which have been supplied by the Physician in charge of the case



Age 7 weeks. Weight 8 lbs. 13 ozs. Before VIROL.

FROM THE MEDICAL REPORT

Every food having failed and milk itself not being able to be digested, the child was fed on Virol and afterwards on milk (1 part), lime water (2 parts) and Virol. Virol was also given on the dummy the whole time as the child would not be quiet without it. The child consuming as much as 2½ ounces of Virol a day. This treatment was maintained until at 49 weeks he weighs 17 lbs.; has cut all his front teeth, and is in perfect health.

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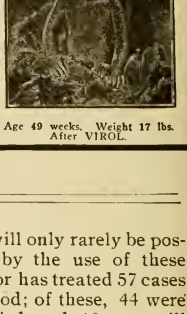


Age 49 weeks. Weight 17 lbs. After VIROL.

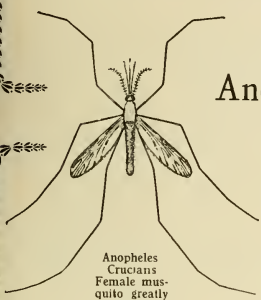
vidual a sufficient quantiiy of bismuth carbonate and by watching its rate of progress through the several portions of the gastro-intestinal tract. In the patient affected with tubercle or rheumatoid arthritis chronic intestinal stasis always exists. In the rheumatoid and tuberculous subjects a very rapid improvement in the general condition of the patient results from the operation of short-circuiting. If the tuberculeus condition has become complicated by the presence of organisms other than those of tubercle, the rate of improvement is less rapid, and, in a degree, proportionate to the severity of the added infection. We find some difficulty in drawing the line between the cases in which the stasis can be met efficiently by the use of paraffin and those in which an alteration in the drainage scheme is advisable. In rheumatoid arthritis and tubercular cases the operation may be performed at any age.

The author describes the mechanism of the conditions in which intestinal stasis is indicated and takes up the symptoms and treatment of chronic intestinal stasis.—Lane, in the British Medical Journal.

Arsenic, Cinnabar and Silicates in Cancer.

A paste containing as chief ingredients arsenic and cinnabar was used locally for the treatment of cancer many years ago and has almost been forgotten. To A. Zeller belongs the credit of having again directed the attention of the medical profession to the remarkable effect of this paste in inoperable tumors or tumors of the external parts of the body where the consent to operation cannot be obtained. This treatment is materially assisted by the use of the silicates internally. There cannot be any doubt that the salts of silicon have a restraining influence upon the further proliferation of the cancer cell though it will only rarely be possible to cure a tumor by the use of these salts alone. The author has treated 57 cases by the combined method; of these, 44 were absolutely cured, 3 died and 10 are still under treatment. The clinical diagnosis was assured in all these cases and in a number microscopic sections were also made. The technique is briefly as follows: The neighborhood of the tumor is cleansed with benzine, then the paste is applied thickly. When dry, collodium is applied in case of small tumors and an aseptic dressing in larger ones. The process is repeated every 8 to 14 days. With larger ulcerations, the patients often complain of severe pains for a number of days. The silicon is given in the form of potassium and sodium silicate, of each, one-half gram three times a day. The powder should be taken at least a year after the patient is cured.—Muench. med. Woch.

Salvarsan per Rectum.—Bagrow (Semaine Medicale) recognizing the contra-indications to intravenous administration, which sometimes exist, has endeavored to get over the difficulty by giving the drug in the form of suppositories. Oil emulsions of salvarsan were first tried, but it was soon found that suppositories of cocoa butter containing 0.1 gram of the drug were more satisfactory. A suppository is introduced at about 5 or 6 p. m., and by the next morning it will be found to be completely absorbed. Any slight local irritation which may be set up usually subsides in two or three hours; the addition of a small amount of cocaine to the supposttory will prevent such irritation. A constitutional reaction usually follows in the course of two or three days, consisting of nausea and lassitude with some rise of temperaturs, which soon passes off. The complete absorption of the

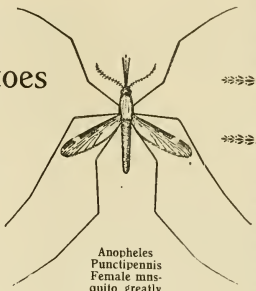


Anopheles Crucians Female mus-quito greatly enlarged.

Anopheline Mosquitoes

ARE

THE CAUSE OF MALARIA



Anopheles Punctipennis Female mns-quito greatly enlarged.

These mosquitoes introduce into the blood malarial parasites which feed upon the red blood cells, i. e., the Haemoglobin.

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Under date of February 25th Dr. J. A. McDonald of Century, Fla., writes as follows;

"I used Creo-Derma as an external application in the treatment of three well marked cases of Pellagra and it acts almost like magic, as the scaly appearance disappears very rapidly with its use. It has also given me entire satisfaction in all cases of Eczema, Salt Rheum, etc."

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drug by the bowel is shown by the fact that it cannot be recovered from the stools. The author suggests that one suppository containing 0.1. gram of salvarsan should be given each week for six weeks, so that the total amount absorbed per rectum is 0.6 gram.

The Hygiene Significance of Bovinine Tuberculosis.

Weber emphasizes the danger to human beings of tuberculosis in cattle, During childhood infection occurs not infrequently by way of the alimentary canal and may cause death through local changes or through systemic infection, In exceptional instances the alimentary type of infection may give rise to the usual forms of tuberculosis, both in children and in adults.—Zeitschrift fur die Tuberkulose.

The Sociological Congress which was held in Atlanta, Ga., April 26, considered separately the respective features of social service assigned them for discussion. Public health, courts and prisons, child welfare, organized charities, race problems and the Church and social service were considered at the various conferences.

The public health conference, over which Dr. W. S. Rankin, of Raleigh, N. C., presided, took up in detail the public health provisions contained in the statutes of various Southern States and considered possible methods of reform. Dr. Sealo Harris, of Mobile, Ala., urged the necessity of full time county health officers in conserving the health in rural districts. Dr. John H. DeWitt, of Nashville, Tenn., who presided at the conference on courts and prisons, made a plea for the abolition of convict lease and contract systems, and for the extension and improvement of juvenile courts and reformatories.

The principal speaker before the child welfare section was Dr. Hastings H. Hart, director of the child helping department of the Russell Sage Foundation, New York. M. A. Auerbach, of Little Rock, Arkansas, and Prof. Charles S. Potts, of the University of Texas, addressed the conference or organized charities, which was presided over by J. C. Logan, of Atlanta.

Race problems were considered at a conference presided over by Dr. James H. Dillard, of New Orleans, while the relation of the Church to social service was discussed at a conference presided over by Dr. John A. Rice, of Fort Worth, Texas.

Federal Report of Friedmann's Clinic.

The first authentic and public report of the Federal Government's investigation of the Friedmann tuberculosis vaccine was made public May 9th. It says that the results of the Public Health Service observations so far do "not justify that confidence in the remedy which has been inspired by widespread publicity.

The National Association for the Study and Prevention of Tuberculosis, before which the report was presented, immediately and unanimously adopted resolutions declaring its belief that "no specific cure for tuberculosis has been discovered that deserves the confidence of the medical profession and the public;" and declaring it to be the duty of the public to continue "all the present well-tried agencies."

Ventilation and Children's Health.

Lassabliere and Schatzmann (Ann. de med, et Chir.) have made investigations on the effect which the aspect and ventilation of dwelling rooms have upon children's

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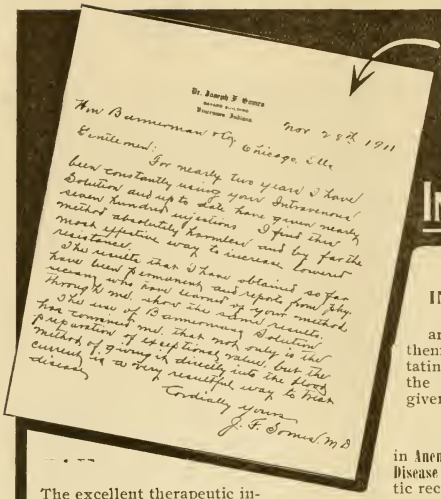
health. They inspected fifteen dwellings occupied by workmen, factory hands, etc., and considered the aspect, the total air capacity of the house and of the children's rooms, as well as the methods of ventilating and heating the whole. They also obtained samples of air from the children's rooms in the early morning and estimated the amount of oxygen and carbonic acid gas present in them. The children were also examined with regard to their previous illnesses, and an examination of their blood was made. They conclude that the number of illnesses among children is greater as the amount of cubic air space is lessened; thus in a family where the children had been ill fourteen times the air capacity was one-third of that in other houses where the children were healthy. In such dwellings the blood counts showed a considerable amount of anemia. In bed rooms anything less than 24 cubic feet per child is insufficient, and renders the family susceptible to infectious disease and anemia. A north or south east aspect appears to be unfavorable. In some cases the open window at night appears to have sufficiently supplemented the want of air space. The rise in carbonic acid was not very high above the normal, but it is probable that long continued exposure to a vitiated atmosphere will interfere with the oxidation of the child and promote malnutrition.—British Medical Journal.



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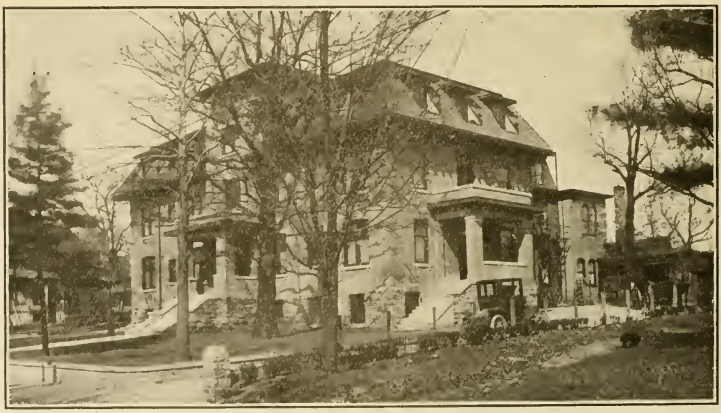

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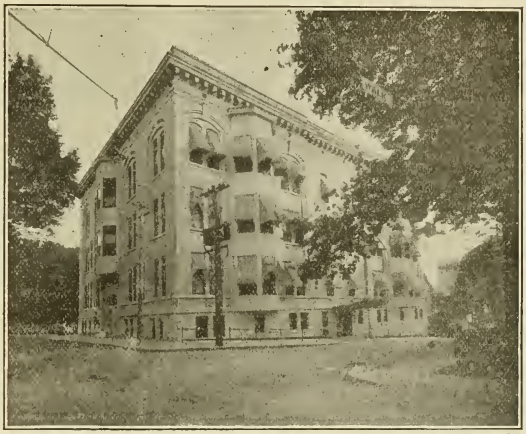


The Main Building Front View.

The following directions are suggested for the benefit of those who may forward material for examination.

All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.

Seventh Street Entrance.

The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test. — After carefully washing, prick the lobule of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and allowed to dry without being spread out on the suface of the slide. After they have dried, the

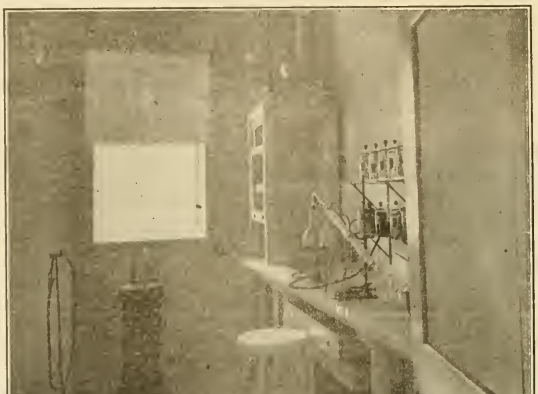
slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

Second Method.—Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count. etc., should be sent to the labaratory on glass slides. As thin a smear as possible should be made.

Clinical Laboratory, Showing Arrangement of Desks, Miscroscopes Microtomes, Incubator, Centrifuge, Etc

Smears For The Detection of Gonococci.—One drop ofpurulent discharge from the urethra should be placed at one end of a clean slide and a thin smear made overthe surface of the slide.

In collecting a specimenf rom a female patient, care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a sterile swab or other instrument. Two smears should always be sent to the laboratory.



Clinical Laboratory, Showing Autoclave, Hood, Operating Tables, Etc.

Urine.—for bacterioligical examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15-20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlic 's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological.—material from either operation orautopsy should be wrapped in gauze moistened with salt solution surrounded by oiledpaper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and thematerial from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They hould rest upon a pad of absorbent cotton, which is placed in thebottom of the jar before

the tumoris dropped in.

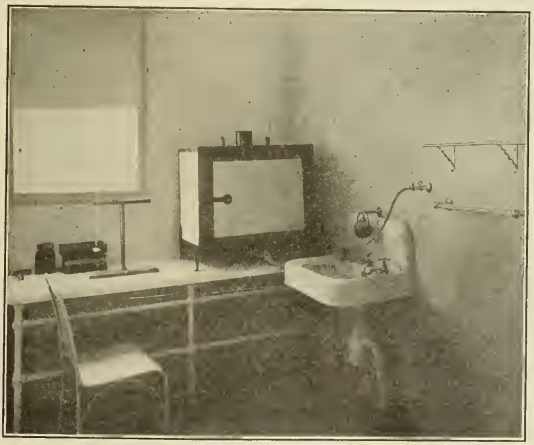
Feces.—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

Wassermann's Test.—Since the advent of the discovery of 606 for the cure of Syphilis. the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.

(Clinical Laboratory, Showing Supplies, Working Table. Etc.)

Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourinquet applied, taken the blood from the vein by means of the syringe.



Clinical Laboratory, With Hot Air Sterilizer, Scales, Lavatory, Etc.

2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourinquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohollam , or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tue, allow to coagulate, cork, pack and mail as any other fraigle package. Atleast two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk.—The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents.—should be sentin a sterilized bottle. Alarge vaseline or quinine bottle usually answers the purpose.

Fig 1.

Fig 11.

The following table gives the cost of many of the examinations made in this laboratory:

Smears and Stains (tubercle bacillus,) gonococci, etc. $1.00

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Complete analysis3.00

Urine.

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Microscopical ... 1.00
Complete analysis 1.50

Pathological Sections.....5 00

Feces Examination 2 00
Blood Culture ... 5.00
Cultures and isolation of bacteria..... 5.00
Stomach Contents2.00
Widal Test..... 2.50
Tissue Sections.. 5.00
Tuberculin Test 5.00
Wassermann's Test 10.00

Milk.

Chemical 2.50
Bacterial 5:00
Water analysis, bacterial examination.. 5.00
Chemical examination including alkalinity, chlorides, ammonia, nitrites and nitrates ...5.00
Quantitative analysis ..... $10.00 to 25.00
Culture Media (per tube) ..... .25
Sterilized tubes and pipettes ..... .15
Coagulation time 2.50
Vaccines 10.00
Sterilized Tubes with swab .....50 Bacterial Cultures 1.00 Sterilized solution.. 5.00 Spinal Puncture and Analysis 5.00

Address all specimen to the Charlotte Sanatorium Laboratory, Charlotte, N. C

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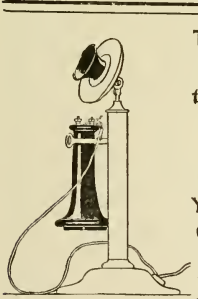

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Attention is called to its local as well as internal use in rheumatism. A 10% solution applied on a bandage is of signal service in reducing the swollen and painful joints. It is also often applied to advantage by cataphoresis. Burnham's Soluble Iodine can be relied upon to afford marked relief, even when lithia and other preparations fail completely.

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is one of the links in the pathologic chain that constitutes intestinal auto-toxemia. A sluggish viscid bile stream deprives the intestine of its natural antiseptic and laxative secretion, and permits the stagnation and putrefaction of the bowel contents, and the systemic absorption of the septic products thus generated. Chologestin (or Tablogestin) stimulates the inactive liver cells, liquefies and increases the biliary secretion, controls excessive fermentation, and assists in the physiologic conversion of the ingested food stuffs. It thus tends to correct hepatic insufficiency, control flatulent distension, and relieve intestinal dyspepsia generally. Samples, formula and literature from F. H. Strong Company, 58 Warren Street, New York City.

"Robinson's Elixir Paraldehyd." 10 per cent. Paraldehyd is hypnotic and anodyne. It calms restlessness and insomnia, and procures unbroken sleep from four to seven hours duration, and to leave behind neither languor, nausea nor digestive disorders. It also acts as a diuretic. It has been found efficient in the insomnia of various acute diseases, and also in acute mania. It is proposed as possessing the good without the evil qualities of chloral. (Nat. Dis., 3d Edit, P., 151.) Robinson-Pettet Co., incorporated. (See page xiv this issue).

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Hardly another of all the preparations in existence offers a wider scope to imposition under the plea of "just as good" than the scientifically standardized Eucalyptol.

The most recent fraud practiced in regard to this product is an attempt to profit by the renown of Sander & Sons. In order to foist upon the unwary a crude oil, that had proved injurious upon application, the firm name of Sander & Sons is illicitly appropriated, the make-up of their goods imitated, and finally the medical reports commenting on the merits of their excellent preparation are made use of to give the desired lustre to the intended deceit.

This fraud, which was exposed at an action tried before the Supreme court of Victoria at Melbourne, and others reported before in the medical literature, show that every physican should see that his patient gets exactly what he prescribed. No "just as good" allowed.

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Since the announcement, some time ago, of the large percentage of recoveries following the use of Rheumatism Phylacogen in over thirteen hundred cases of rheumatism —results reported by clinicians in various sections of the United States—interest in this new bacterial derivative has developed to a very marked degree. Physicians everywhere are demanding information in regard to this therapeutic agent: an agent which appears to produce recoveries in at least 85 per cent. of cases—and that, too, in a disease that for hundreds of years has been a stumbling-block to the medical profession.

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deformans, traumatisms, etc. The failure of Rheumatism Phylacogen, properly administered, affords presumptive evidence of an error in diagnosis." In the case of chronic rheumatic conditions stress is laid upon the fact that continuous treatment for three or four weeks may be necessary. If, however, the patient does not show continuous improvement, it is urged that the treatment be discontinued and a careful re-examination made so that the exact pathological condition may be determined.

Other phases of the Phylacogen therapy —as questions of dosage, reactions, methods of administration, etc.,—might very properly be considered at this juncture. These, however, are subjects that cannot be adequately discussed within the limits of this article. They are fully treated in the Phylacogen literature, issued by Parke, Davis & Co., and procurable by any physician upon request to the home offices at Detroit, Michigan.

Sodium Cinnamate.

Hypodermic injections of this substance are highly valued by the author in all cases in which a general tonic effect is required. He has found it distinctly superior to the cacodylates, but points out the fact that the doses of sodium cinnamate hitherto recommended have been altogether too small. As an initial dose he injects the contents of a 5-c.c. (1¼ dram) ampoule, including 0.5 Gm. (5-6 grain) of the cinnamate. This is rapidly increased by one-half, then doubled, the bulk of the solution, however, being kept the same. The latter amount of the drug—0.1 Gm.—can be injected daily without the least danger, and no intolerance was observed in over 300 cases. The beneficial effects promptly assert themselves;the patients remark of their own accord on the improvement in their condition.—Laborde, Paris medical.

Neosalvarsan.

This product is better borne, at the time of injection, than salvarsan. Later. too, unpleasant effects, such as fever, nausea, vomiting, headache, and general lassitude, are less often observed with the new remedy than with the old. Nevertheless, modes of procedure in which advantage is taken of the greater immediate tolerance of the system to neosalvarsan to inject excessively large doses of the latter are to be condemned, as untoward happenings have occurred as a consequence, some of which have been quite serious. Thus, the author reports a case in which the administration of 1.5 Gm. of neosalvarsan in two doses was followed by paraplegia, the condition later becoming so grave as to endanger the patient's life. For the present at least, no attempt should be made to improve upon the results obtained with salvarsan by increasing the dosage of neosalvarsan. Even with moderate doses of the latter, untoward results have been witnessed. The degree of frequency with which these occur will eventually lead to a decision upon the value of this drug.

In point of general efficiency, neosalvarsan is comparable with salvarsan. In view of the greater immediate tolerance to it, it may be employed in preference to salvarsan in cases where the latter is badly borne, as well as in cases of tabes, general paralysis, arteriosclerosis, cardiac disease,—in brief, in all patients in whom too marked a reaction of the organism is to be avoided and where only small doses of the drug are indicated.

The method of choice in administering neosalvarsan, as with salvarsan itself, is still being studied. Combined mercurial and arsenical treatment already seems, however, to be the best procedure in the case of each of the drugs.—Bayet, Academie Royal de Medecine de Belgique.

Treatment of Cholelithiasis.

According to Mayer, the following indications for operation in cholelithiasis appear to be established, though the question has nevertheless to be decided in each individual case after careful consideration of all the factors concerned:

1. Acute cholecystitis should be treated medically; only the most severe form, cholecystitis acutissima, belongs to the surgeon.

2. Chronic relapsing cholecystitis should be operated only when all agencies of medical therapy have failed.

3. Operation is indicated in chronic obstruction of the ductus choledochus if two or three months of medical treatment are without effect. In cases with prolonged remittent fever, rigors, and bad general condition, operation is unquestionably indicated.

4. Hydrops vesicæ felleæ demands operation only if there are persistent and very severe irritative phenomena.

5. Empyema of the gall bladder and all suppurating processes on the region of the gall-bladder and in the liver demand operation.

6. Adhesions about the gall-bladder should be treated medically so long as the inconvenience produced is not marked. In the most severe cases operation is required.

7. Acute and chronic pancreatitis resulting from cholelithiasis belong to the surgeon.—The London Lancet.

The Charlotte Medical Journal

VOL. LXVII CHARLOTTE, N. C., JUNE, 1913. No. 6

Womankind on the Continent and in America.*

By Addison G. Brenizer, A.B., M.D., Surgeon Charlotte Sanatorium and Presbyterian Hospital; Professor of Surgical Pathology and Operative Surgery on the Cadaver in the North Carolina Medical College, Charlotte, N. C.

I. The schools of medical training and hospitals.

II. The origin and development of the training schools for nurses.

III. The character of the Continental woman as compared with the American woman, used as an explanation of the differences in qualities of nurses on the two sides of the water.

I. Institutional work in Medicine has made enormous progress during the last twenty years, especially in America. And the hospital material has been furnished largely by surgical cases, because these cases, as the surgeon sees them, are par excellence hospital patients, and demand as an absolute necessity for their protection the modern elaborate equipment and team work of all assistants in an institution. Therefore the effort of modern hospital organization to prevent a break of the chain at its smallest and weakest links.

This development and progress in America is due first of all, to pioneers who, after their graduation, went to Europe, where men like Billroth, Volkmann, Thiersh, Pean and Ollier drew to their clinics a large number of Americans At the same time these men studied pathology, the ground work of all medicine and surgery, under such men as Rokitansky, Virchow and Cohnheim. They brought their knowledge home, and with the spirit of practical application, which so characterizes the American man and to a less extent the American woman, soon became real and successful artists in surgery and able trainers of a great multitude of surgeons and their absolute complements, the nurses. Three of my former professors at Johns Hopkins were of this class, namely: Wm. H. Welch, Wm. S. Halstead and Howard A. Kelly, to whom I am indebted for a brilliant example, advice and active initiative in placing me securely in the hands of their former fellow students and friends, now taking the places left vacant by the professors of the older school, just as they themselves have taken up the professorships in our leading schools.

I have heard Welch tell of the older school, especially of the time when Koch, then a country physician, came to Cohnheim's Laboratory with his tubercle bacillus to be aided in working out this something he had found.

The field from which I draw my judgment of conditions on the Continent is largely Heidelberg, Vienna and Paris, while I was in the service of Czerny, Narath, Eiselsberg, Lorenz, Rosthorn, Lejars and Dubouchet. Such cities as Berlin, Leipsig, Breslau, Munich, Jena in Germany, Budapest and Prague in Austria-Aungary and Berne in Switzerland offer me sites of review in passing on a visit.

Along with the surgical excellence of certain of these clinics and accounting, I think largely for their worth there is to be found well organized and trained bodies of young women as nurses. Dollinger's clinic in Budapest and Gosset's private hospital in Paris have quite the arrangement and air in hospital construction and in the development of nursing as our best American hospitals and the usual abuse, as is so gereral on the Continent of employing slovenly, sloppy maids and old women of the servant class, is wiped out. This stimulus has returned to them from America for it is in just such clinics that one finds the chief familiar with American setting.

As a rule, nursing by the woman of refinement is at a low ebb on the Continent. The organization of the nurses under the red-cross as a working unit in the army is, however quite a different thing and is excellent in its uuity and working force but has to do with the rougher lines of the field of battle. In fact the continental type of nurse is well fitted for this phase of nursing, calling as it does for so much drudgery. But this system hardly interests us from our point of view, since we have no big standing army and are expecting no extreme emergencies.

The freedom allowed here in America to the surgeon, which makes the practice of surgery not only the business of the appointed professor, as in Europe, but open to every one who can do the work and the realization that to do this work he must have the where-with-all as a protection, since he has no title to live behind, as a screen, has forced him to seek the means in the way

*Delivered before the Convention of the North Carolina State Nurses Association, June 19, 20, 21, 1912, Charlotte, N. C.

of institutional equipment and staff organization. He has found the equipment through American money and his support in the organization and through training of all his assistants to work as a unit for him. These two factors have brought about a rapid and remarkable change in conditions. American institutions have become not only recognized but admired and copied in numerous places abroad.

So, it is proven that the success of a hospital depends upon its entire staff working as a unit (it is not a one man's affair but a team's) with every department directed by a capable head and the eyes of all heads turned on the sick man as the central focus.

The realization of the importance of the nurses position in connection with the hospital, the freedom given her when trained to move in her department and the same spirit of receptivity combined with practical application on her part as on the part of the American surgeon, coupled with her character as an independent woman, have given her a position in relation to medical work superior to that elsewhere in the world.

Clara Barton, the name of an American woman, one we should not forget and whose death we all bemourned last spring on learning of the ending of her glorious career, was not called to the Continent to learn but to instruct.

II. The modern training school for nurses took its primary origin, as surge.y did, in the Old World and likewise in Germany, at Keiserwerth, begun by Parson Fleidner and his wife in 1833. Thus the first attempt at training nurses is a comparatively recent venture. A century ago, the nursing of the sick and wounded was done by members of religious orders or was left to the mercy of women of the lowest classes.

The importance of the new movement was recognized but slowly before 1854, the first year of the Crimean War when the armies of England and France were engaged in active service against Russia. A great many lives were being lost in battle, but a far greater number were sacrificed daily through neglect and mismanagement and the total absence of sanitary measures or provision for the care of the sick and wounded. The English army was much worse off in this respect than the French, which had a nursing corps of "Sisters of Mercy."

The report of the conditions at the military hospitals finally led the Secretary of War to ask the assistance and co-operation of an English lady, Florence Nightengale. This remarkable woman was born in Florence, Italy, in 1820. As she grew to womanhood she became deeply impressed by the necessity for some reform in the methods of caring for the sick. She visited many of the hospitals of Europe and studied their management, and in 1849 she entered Kaiserwerth for a period of training. Later she spent sometime in the French hospitals where nursing had been done by nuns for many hundred years. She learned more from the faults than the good qualities of the hospitals. When the call for her services came, it found her well qualified for the tremendous constructive work before her. She set out from England with a band of volunteer nurses and reached the Crimea in the autumn of 1854 and spent two years there, completely re-organizing the nursing service.

Her splendid work was rewarded by the undying gratitude of the English nation, which through the medium of Parliament gave her a vote of thanks and a gift of £50,000 which she devoted to founding the first English training school for nurses at St. Thomas' Hospital in London. This is the further developed and secondary nucleus from which has sprung our numerous American schools of today,

The training school for nurses on the Continent, however, has still followed, until quite recently, the original pace set by the Sisters of Mercy for several hundred years in France and that of the old school at Kaiserwerth, Germany. To this day, the French and German words for nurse are retained from former times, that is "garde de malade" and "schwester" which mean, one who simply watches over the sick and Sister of Mercy.

Now there have been several important conditions shaping the American school, different from those shaping the Continental school. In the first place the American school is an offshoot from St. Thomas Hospital in London, out of the school founded by Florence Nightengale on the basis of knowledge gained from the hospital on the Continent and her first training at Kaiserwerth, the old school, coupled with the elevation of nursing in her hands during her experience in the Crimean War. The American school accordingly began upon a higher plane than the Continental schools. Growth and changes of material, social and intellectual phases of American life have been rapid and pliable on new ground: the process has been construction, rather than destruction and reconstruction. From the very beginning of settling in America and probably prompted largely by the conditions during the pioneer days the developing type of American woman has been characterized by independence of character and thought even low in the social scale and by her establishment of the

respect and recognition of her brother. I think this last factor, that is, "What the American woman, herself, has developed to be," coupled with other factors secondarily, explain more than anything else the fitness and superiority of the American woman in any profession, and especially as a trained nurse.

Nursing demanded such a type, for it was at first an humble and considered to be a vulgar profession among women of the lowest classes. But we can't say more of surgery, for was it not Ambroise Pare, a barber surgeon himself, who placed the profession in better hands, taking it from the lot of charlatans and cut throats? (And let us be on our guard, during these days of selfish commercialism, that we do not experience a reversion to former times). There is nothing humble in serving humanity and the sick even in the roughest detail, unless this quality pre-exist in the spirit and attitude of the individual serving, due to lack of culture and refinement and proper training.

III. It is the philosophy of the differences between womankind here and abroad which I wish especially to depict, believing these differences in the relation of the woman to society, the family and the man, as I have stated, to account for the ability of the American woman to excel as comparad with her Continental sister. A difference is recognized even abroad, for why should a recent French statesman be prompted to remark, "Were it my lot to appear on earth again, I should pray that it be in the embodiment of an American woman."

If we may judge the intellectual capacities of a race by the history of its greatest men, so we can gauge the moral and social possibilities of a people by the character of its greatest and noblest women.

Continental women have played a giant's part in history, though there have been none of the type of Queens Elizabeth and Victoria of England, except in the one splendid instance of Maria Theresa. Such types as the Empress Catherine of Russia, Princess Auguste Fredericke of Anhalt Zerbst and Marie Antionette are marked forever in history; the last two, though fine examples of the power of the will and intellect, can hardly be said to stand as models of female virtue. But history shows no fairer figure than in Queen Louisa of Prussia, the grandmother of the present Emperor. In her were united all the noblest characteristics of womankind; and her example, stirring the soul of an entire nation in her time, may be said to be one of the highest prototypes for the Germans of today to dwell on and to live up to. It has been stated that, without the moral purification which Prussian society underwent through the bright example of her domestic life, it is hardly possible that the rising of Prussia in 1813 against Napoleon could have taken place. You are all familiar with copies of the magnificent painting of her, which hangs in the art gallery in Dresden.

Next to history, the literature of a country affords us a clue to the character of a nation's women. At least, its poets show us what its ideals are like. The heroines of Walter Scott, Richardson's "Clarissa Harlowe," Longfellow's "Evangeline," and above all the creations of Shakespeare, are heirlooms to the end of time to show posterity what English and American womanhood resembled in its purest ideality, perhaps, the rarest union of tenderness allied to strength of character yet revealed to man.

A cursory glance at the creators of European fiction shows a marked difference to those of our country, as depicted by Goethe, Schiller, Racine and Moliere. Our ideal woman shows an independence of character that is absent from their types. There is something in the Continental ideal of womankind that bids us feel their devotion but once given, leaves us no further fields to conquer. There is something in the English and American types that makes us feel it imperative not only to gain but to retain her devotion. Thus we are of the opinion that especially American women hold their influence longer than do their European sisters.

If these female creations excite the admiration of the men, the lyric poetry of the nation has an inordinate influence over the budding female mind. In fact, poetic sentimentality fills them often with far too many illusions to meet the realities of life. For it is an instance of the strange double nature of the German character that while his poetry is so sentimental, his conduct in daily life is in such marked contrast. Anybody can convince himself of the above by a glance at the numberless advertisements with offers of marriage that are found in almost every newspaper, not only now-a-days, for the custom dates back over a hundred years. These productions are strangely matter-of-fact and sober in tone, the principal points in request being usually a little money and domestic virtues of manifold description on the part of the woman.

To our mind Continental girls lack that freedom our own enjoy and, while the men are never tired of vaunting the virtue of their women, the slightest intimacy with the other sex, unless followed by immediate betrothal, is sufficient for gossip to lay hold of and discredit it. American women are said to be prudish, but in the art of feeling

shocked, Fraulein and Mademoiselle beat their American sisters hollow. In fact, among the brilliant display of a knowledge of English the word "shocking" flares out from other expressions like "a letler," "Hinz pickles," "American shuhs" and "bifsteak." At parties you can hardly dance several times with a young lady, or show a little preference for her, without gossip at once busying itself with its being a case of engagement.

This is a great pity, and is one reason girls are not brought up in greater independence of thought and character and taught to look to their own energies as offering a possible career in life, outside wedlock. On the other hand we must admit that Continental girls are much less influenced by the hope of marrying money and position than the daughters of our rich classes; This is all the more to their credit, when we bear in mind that their men are much more anxious to marry money than our own.

The daughters of the poor aristocracy have a far greater horror of marrying beneath them than our own aristocracy, (if we have any such breed) for even money and luxury fail to overcome their traditional objection to trade. They will marry poverty in almost any form sooner than combine with the practical, working side of life.

While we, perhaps, carry too little sentiment into our every day life, European women have a longing for more than they usually get, and it is one of their good points, though often disastrous to them, that their disappointments rarely take an aggressive form. The circumstances of her life are not of a nature to produce those extraordinary instances of strong willed initiative we meet among our womankind. Her education is more homely, her life more restricted; the organization of European society, with its many different strata, does not give her a sphere of action, such as many American women have found and shone in. Her life is comparatively uneventful, not to say monotonous, so that her virtues, let alone her shortcomings, are tinged with the peculiarities of her surroundings. The French woman is, however, far more tactful in her position than the German woman. It is only among the extreme aristocracy and plutocracy with money that we find anything like the independence of the American woman; they are more cosmopolitan and less nationally typical than others.

In Germany the woman's place is at home; there she shines pre-eminent, self-sacrificing, devoted to her children. She is more domesticated than women of other nations. It must have been a dyspeptic German husband who invented the saying, "Women and dogs should be kept indoors." For, although German husbands do not grant their wives that equality of companionship we witness in America, still she is a true mother to her children, and wields an influence over them, that is, perhaps, met with again only in France.

If to our minds, Continental wives may in many respects be considered little better than servants, on the other hand, they hold that our womankind inclines to luxury and laziness. There is certainly less outward pretense among the middle classes living well within their income, with something to spare than with us.

Of German husbands, the poet Heine in one of his vicious moods said, "German married life is no true wedlock. The husband has no wife, but a servant, and he continues to live on in spirit his isolated bachelor life, even in the family circle." This is often true but is always the husband's fault. In the small matters of every day life, he is not always as appreciative of his consort's qualities as he might be. In fact, he is often unconscious of them, for, being brought up to expect so much, he has rarely the sad experience of what a curse a lazy, pleasure seeking woman might become. And thus Bismarck's remark that, "Our wives are the only ladies we are rude to," has more than a passing meaning.

Notwithstanding the many ethical qualities the love-sick men credit their women with, once married, they generally become wonderfully sober and matter-of-fact. They know they are stronger, and, except in rare cases of good breeding, do not scruple to show it when their sensitive nerves are irritated. They are inclined to bully and domineer, and direct contradiction is not at all uncommon and is thought nothing of. Nor do they like to be told that they are often responsible for the weakness of their women. On the contrary they are nervously anxious that their help-mates should behold in their august countenances the effulgence of "Jupiter Tonans" and recognize it to be their supreme function to serve and obey.

There is a certain restlessness in the temperament of the European men that bids them devote much of their time in cafes and wine and beer shops, in immediate society of their own sex and secondarily in the society of another type of the other sex. The number and extensive patronage of these cafes and the character of their clientelle is far beyond belief. Men of almost every position of life frequent these places and those that are married invariably justify this habit by telling their indulgent wives that it is necessary for the broader intellect

of man to seek sweet converse and animation in the society of their own sex and kind; the interchange of ideas is important to keep them abreast of the great questions of the day. Those who have enjoyed the privilege of the society of some of these places are likely to hold a different opinion of the breadth and wealth of ideas that permeate the smoky atmosphere. The fact remains that Continental husbands spend more of their time in men's company without their wives than we do, and hence their women are much restricted to the company of their own sex. This is the more to be regretted when we bear in mind that the education of women on the Continent is so excellent that it only requires such social fostering as they often seek in vain or in often pitiable ways, in order to make their society the most interesting one could wish, ten times more healthy and entertaining than that of any "beer house" or cafe. As it is, ladies tea parties, so-called "kaffee klatsch," restrict them to small talk and petty gossip, and thus cause a want of breadth of view and feeling, entirely unworthy of the excellent education they have received.

In this respect Continental husbands are selfish in the extreme and rarely fight out that victory over their meaner nature by which one conquers his longing to spend an evening at his club, and submissively hurries home to a fire-side, where he does not always receive an adequate welcome. For the male type of the "silent sufferer" is much more common with us than on the continent.

These remarks apply more to the so-called better middle classes, to the honor of the masses it must be said, that their wives share more of their company. In fact, they usually take their simple amusements together.

I have dwelt on the typical short-comings, which, as everywhere, mark the majority. The exceptions are also distinctly typical, as there always exists contrasts where conditions are extreme, and nowhere reach a higher ideal of family life than on the Continent. Here we find sympathetic feeling blended with rare breadth of philosophic eduacation and culture; skill in arts and delicate tenderness of heart.

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The Question of Cancer.

By J. Garland Sherrill, M.D., Louisville, Ky.

Of all the questions presenting to the medical profession for solution there is none so elusive, yet so momentous, as cancer. The term in its strictest scientific sense embraces only the epithelial malignant growths. To the lay mind, however, there enters into consideration any and every form of malignant disease. To the patient it matters not whether he is suffering from an epithelial or a connective tissue growth, but it is of vital importance whether or not a given malady will likely terminate favorably or destroy his life. To the lay mind cancer is a disease to be dreaded, hidden, and mentioned with bated breath lest some one find out his condition. Of necessity this attitude tends to lessen the opportunity for relief, which might follow early and radical measures for the relief of the affection. There is undoubtedly a marked and steady increase in the frequency of the affection. It is claimed that in England one in every eight women who reach 35 years dies from it. In 1908, 40,000 Americans are known to have died from cancer. Only recently have we awakened to the formidable nature of the affection. Cancer research has been undertaken in a vigorous way both here and abroad, but so far very little definite knowledge has been added to our information upon the subject. When the question "What is the cause of cancer?" is put to us we are forced to confess our lack of knowledge. While some of us have rather strong convictions as to the nature of the actual cause, we can only say that our belief is not as yet confirmed. But little is known of the immediate cause except that certain forms of irritation predispose to its development, as is the case in carcinoma of the cheek which develops in betel nut chewers, the scrotal cancer of chimney sweeps, and cancer of the abdominal wall in charcoal-carriers of Kurdistan, etc. Cancer of the lip frequently follows the irritation of a rough clay pipe, and X-ray burns often result in epithelioma.

It is well established that nearly all cancers of the stomach develop on the site of an old ulcer. The same is true of Marjolin's ulcer of the leg. Again the irritation of gall-stones is clearly proven to be a factor in the production of cancer of this organ. The same may be said of chronic appendicitis of mild type in relation to cancer of appendix vermiformis. The writer adheres strongly to the view that this disease is of parasitic origin. However little we know of the cause; the history, the characteristics, and final termination of the disease are quite well known:

1. While in the main an affection of adult life, yet cancer (carcinoma) and more especially sarcoma has been met frequently in young people.

2. Primarily malignant disease is a local affection, and when seen and removed at this stage cure is fairly certain.

3. No one can tell just when this period of curability ends; also it is too frequently gone when the patient comes to the surgeon.

4. The symptoms are so insidious in many cases that the disease has become incurable before the patient knows her condition. This is especially likely to occur in certain internal cancers (intestine, etc.), and in the uterine form. The reason for this lies in the fact that the early symptoms are often so slight that they do not excite notice. Pain, long considered as a *sine qua non* of cancer in early stages, is in many cases absent until the disease is hopeless. This is true of uterine and mammary cancer; also of intestinal as well as many other internal cancers.

5. The life history of malignant disease is slow, progressive, but persistent; in the absence of treatment it tends to a fatal issue, an axiom to which there are a few isolated examples, but so few as to be a curiosity.

6. The longevity of a patient after the onset of cancer is usually two or three years, with some exceptions where the condition lasts through many years before death results. There are certain superficial epithelial growths which run a very slow course if unirritated; they are, however, often made very active if anything is attempted for their relief less than a very radical interference.

7. No one can tell in the early stages of malignancy just how active the process will prove to be, some of the seemingly benign conditions proving rapidly fatal while the seemingly very malignant cases often progress but slowly.

8. Certain individuals seem to develop at least a partial immunity to the disease; in this way only can we account for its slow progress.

9. The disease advances by local infiltration of the adjacent structures and in time breaks the local barriers and spreads by metastasis to other and distant structures, and coincident with this invasion the chance of cure is diminished or lost.

10. The final stages show an exceedingly distressing condition, local ulceration, perhaps hemorrhages, a foul discharge, marked emaciation and progressive anemia, the so-called cancerous cachexia, great pain and suffering preceding the end.

What can be done to remedy this condition? It is the duty of the profession to instruct the public as to the possibility of a cure if applied early; to condemn the false sense of modesty which prevents many women from seeking medical aid and to inform them of those symptoms and conditions which cause a suspicion of the presence of malignant disease. Among these may be mentioned the appearance of any unusual or persistent new growth, especially if it is steadily or spasmodically increasing in size; the onset of pain in a previously innocent tumor; the appearance of irregular uterine hemorrhage, especially at or after the menopause, the latter being especially significant; the presence of a watery, or slightly blood-stained, clear vaginal discharge, with or without a burning pain in the pelvis points to uterine cancer; progressively increasing constipation, with marked gaseous distension of the abdomen points a warning of a developing cancer of the gut, especially if accompanied by tarry or blood-stained stools. Vomiting after meals, especially if blood is vomited, should send the patient to a physician. Fortunately this condition causes so much alarm that the attendant is called at once. History of gall-stone attacks, perhaps the passage of stones, with a slowly developing but persistent afebrile jaundice is suspicious of gall-bladder carcinoma. Persistent sores around the lips, cheeks, tongue, etc., which resist ordinary remedies, should not be neglected. Rapid enlargements of bone or the occurrence of spontaneous fracture are often indicative of malignancy.

The duty of the physician again is to examine every patient promptly, carefully and repeatedly if any symptoms resembling those of cancer are present. If there is one thing I would urge most upon the Fellows it is the importance of careful anemnesis and a complete physical examination of the patient. There has been considerable improvement along this line in recent years. Only the most painstaking investigation prevents errors in diagnosis.

Great good can be accomplished by the attendant by urging the removal of all sources of irritation as a preventive measure against the development of malignancy. When we consider that 98 per cent. of uterine carcinomata occur in parous women, one at once is impressed with the possible importance of traumatism at child-birth. All tears of the cervix should be repaired and if necessary amputation of the cervix done. Gall-stones should be removed; old leg ulcers carefully treated, and all growths which are increasing in size should be removed radically. Gastric ulcers which do not respond promptly to medical treatment should be submitted to operation. One of the most important points for the attendant's consideration is the advice to be given to young women with small, apparently benign, adenomatous growths in the breast. Some would go so far as to advise that all be removed, the stand taken by Keen and Richardson in reference to moles, etc., on the skin; while others hold that it is un-

necessary to subject these young women to operation unless the growth is increasing in size. The writer would take the position that such patients should have the advice of an experienced surgeon, and in young girls under twenty, when clear that the condition is benign and the tumors small, circumscribed and mobile, operation may safely be deferred. These patients, however, should at short intervals consult a competent surgeon in order that any change in their condition may immediately be met by operation. My reason for taking this position in regard to these small benign tumors of the breast is founded upon personal experience wherein I have seen several small enlargements which were probably due to obstruction of the acini disapper in the course of a few weeks. Again, because I have a number of women carry growths of this kind throughout their lives without ever having any inconvenience from them. While it is probably true that one takes some risk in following this advice, yet the immediate sacrifice of breasts is avoided and prompt interference may be done when the conditions justify. Certainly amputation of the breast, which so horrifies a woman, would not be necessary. But if over 25 years of age or if the growth is increasing in size, shows any induration or fixation of the skin, retraction of the nipple, glandular enlurgement with or without pain, (the usual symptoms of malignancy) prompt and wide extirpation must be done. Every one knows how loath a woman is to have her breast removed, but it is far better to have no breast and live than to die because of its retention.

When cancer is fully established the remedy par excellence is wide extirpation. When this cannot be employed the actual cautery may prove useful. The employment of pastes and caustics are always uncertain because difficult to control the extent of their action, always cause disfiguration and deceive the patient into the belief that a cure has been obtained. In superficial cancers the Roentgen ray, radium, and fulguration are claimed by some to be efficacious, but these claims are not generally accepted, and these measures have not displaced operative removal.

What can be done for the neglected cases? Palliative operations with proper medicinal agents can do much for these sufferers, making them far more comfortable and sometimes prolonging life. In cases of cancer of the cervix uteri where the disease has progressed so far that radical removal is impossible, thorough cauterization followed by the application of acetone, as recommended by Gellhorn, will be found most advantageous and will add much to the patient's comfort.

Some Remarks on the Treatment of Diffuse Peritonitis.

By Jno. W. Winston, M.D., Norfolk, Va.

Of course the first step in treating diffuse peritonitis is surgical. Where it comes from a ruptured stomach, bowel, gall bladder or appendix, the quicker we remedy these abnormalities the better for our patients. In most of these cases nature makes an effort and throws out a defense by means of plastic lymp and adhesions and often effectively stops the spread of the highly infective material that has been set loose into the peritoneal cavity. In such cases, closing the abnormal opening of the viscerae, with sponging and sufficient drainage, will often suffice to save the patient's life. In these cases too much exploring or washing the peritoneum is absolute folly and very dangerous, as it will most certainly spread the infection to parts yet uninfected. On the other hand, we see cases where the stomach or bowel has ruptured through an old ulcer, and immediately the stomach or bowel contents is poured out over the peritoneum in such a large quantity and so rapidly that nature is not quick enough to keep the whole peritoneal surface from having a bath. Fortunately we have learned to put these cases on the table at once for operation and luckily for the patient such accidents generally occur high up in the alimentary tract, where infection is not so great as lower down. In such cases, where there is absolutely no walling off and the infection is everywhere, our first step is to close the perforation and sponge out all we can. It is not the custom and against the judgment of many good surgeons, but here we have a condition where the infective material is spread as much as it can be, the rupture is only a few hours old and active inflammation of the whole peritoneum has not taken place. It certainly seems to me that in such cases it is reasonable and good surgery to wash the whole peritoneum well with warm saline solution. In these selected cases, it is not possible to spread the infection more than it has already been, and it certainly washes away many organisms and dilutes the fluid left, thus giving nature more time to respond to its call to duty. This proceedure is only recommended when the perforation is in the upper abdomen, for it is only in such locations that large amounts of visceral contents spread so rapidly over all the peritoneal surface. Drainage within the peritoneal cavity moves toward the pelvis, and therefore it is always wise to leave a permanent drain in the pelvis, notwithstanding you may have placed drains

at other points. The lower abdomen and pelvis seems to be better able to look after itself than higher up, and therefore the Fowler-Murphy position is good. The drop saline is good as it stimulates and waters the patient, is well retained and continuously dilutes the poisons taken up by the peritoneal lymphatics. It allays the patient's thirst and suffices for the dangerous proceedure of giving water by the mouth. The patient's stomach should always be washed while under the anaesthetic, and care should be taken that all the fluid be drained out, as anything left in the stomach tends to the formation of gas and causes more or less contraction. In looking over the literature of such internists as Osler and Strumpell, on the medical treatment of peritonitis, one is struck with the fact that after discussing a whole line of remedies they all come down to the one fact that opium is, after all, the only drug that accomplishes anything worth while—and this is not due to its action in relieving pain but due to the fact that it puts the bowels at rest by stopping peristalsis. Now, if in days gone by, when surgery was not as advanced as it is today and when it was not as often resorted to, much good was done by simply stopping peristalsis it is good to stop and reason, wherefore this good. Some good come from the fact that a paralyzed gut did not force out into the peritoneal cavity so much of its contents as an active one and thus gave nature more time, but as we have come to see it today, we know that condition does not entirely stop the discharge from the viscera, therefore we have to look elsewhere for some of the good done. It has been proven by experiments on animals that tieing off certain sections of gut will in a short time produce a profound toxemia, even though there be no peritonitis. It has also been shown that this is not alone due to absorption of the bowel contents but that the epithelial lining of the gut in a short time begins to functionate in such a way as to elaborate a very toxic poison. We see the same effects in obstructions in the human and wonder at the rapidity with which they become poisoned. Again, all of us have seen cases of peritonitis without any bowel obstruction, do well, while on the other hand we have seen less severe infections of the peritoneum succumb, not because of the infection but because of bowel obstruction that complicates this condition. Now if these facts be true, it appears that, after we have done what we can surgically, our chief aim should be to do our best to avoid obstruction, whether it be mechanical or functional.

It is best for a few days at least to withhold anything by the mouth, as it will certainly cause some peristalsis and will not be handled well. It only gives rise to the formation of gas and often on washing out the stomach a day later, will still be found there. Whenever there occurs an accumulation of gas in the stomach it is wise to wash it out, as the patient cannot expel it by the mouth and if allowed to pass into the bowel will only add to the peristalsis and the discomfort of the patient.

Now comes the all important question of purgation. It seems to be the one thought of many surgeons, that if they can get a goad purgative through the patient, that they have accomplished much towards the right end. I will change that a little and say that if they do get a purgative through the patient, that it is a good sign that the patient is not in much danger, but if that purgative does not go through readily it may mean that patient's life, and it is often the case that it will not go through while if they had been let alone and the inflamed gut given more time, it would right itself. When the peritoneal covering of the bowel is highly inflamed and the gut is more or less kinked, often its lumen is cut down in size and an increased peristalsis, instead of forcing the fecal contents by this point, may, and often does, entirely close the small lumen, which, had it been left at rest, would have sufficed to allow the passage of gas and fecal contents. I am afraid that I learned this lesson at the cost of a patient's life.

Let us remember that it is not the contents of the gut that makes things dangerous but obstruction with its consequent sequellæ.

It is well to remember all that can be done for the peritonitis was done at the operation and that now our main object is to avoid getting either a mechanical or functional obstruction. At one time Lawson Tait advocated strongly the use of salines, with the idea that it would remove fluid from the gut wall and thus reduce the congestion of the peritoneum, but today this theory is exploded and we know that such a thing does nothing more than add to the chance of obstruction and waste the patient's valuable strength.

The frequent passage of the rectal tube to allow the escape of gas and enemeta of oil and glycerine once or twice a day empties the lower bowel and causes the fecal contents above to slowly come down beyond the point of danger, without producing a violent peristalsis. It is best to withhold purgatives for weeks, until the peritoneum is healed and then if we get obstruction it can be diagnosed and we are in the position to go in and loosen the adhesions. When the perforation is in the duodenum some

have advocated doing a gastro-enterostomy and while it seems like a dangerous risk, it at least does away with the dangers from a pylorispasm and its evil consequences. If this operation is not done the stomach tube is a friend and its good effects, from repeated usage, is quickly and strikingly noticed.

The Nature and Cause of Cancer.

By F. T. Meriwether, M.D., Asheville, N. C.

I will not touch, in this paper, upon the treatment of cancer, for, in the light of our present knowledge, there is only one treatment, surgical; removal of the growth in its entirety, with all affected glands, or when inoperable, the use of a cautery as a palliative.

Nor will I take up the subject of its diagnosis, though its early diagnosis is the most important factor in its treatment.

I do not believe that the average medical man realizes its importance of the study of cancer mortality.

From the best statistics, more men and women over thirty-five years of age die from cancer than die from tuberculosis.

According to McGlinn, the population of the registration area of this country for males and females over thirty-five years of age for 1900 was: Males, 4,933,424; females, 4,767,304; and of this number 281,909 men and 518,185 women have died or will die of cancer, and this rate is increasing. In 1900 the total carcinoma death rate had increased 12.2 per 100,000 over the previous ten years. And we must realize that a large number of deaths from cancer, both primary and secondary, are reported, either from ignorance of the real cause of death, or an attempt to save the family's feelings, as dying from complications which so often occur at the end, pneumonia, disease of the kidney or liver, stomach, etc. In a study by Culliott, in France it was found that practically twice as many died from cancer as were reported.

Edwards shows that in twenty-eight cities the death rate increased from 48.5 to 77.3 per 100,000 from 1883 to 1907.

By some, this increase has been thought due to an increase in population, but as Roger Williams points out, while the population of Great Britian doubled between 1850 and 1905, the cancer mortality increased six times. Also the view that the apparent increase is due to a more improved diagnosis may be contradicted by the fact that, while this may prove so in a measure, still it does not provide for the large loss of the number which should be substracted from the older statistics, by the including of fibroids, etc., which were undoubtedly classed as carcinomas.

It is not necessary to quote any further statistics, for there is no doubt at the present time but what this disease is the great scourge of the human race.

The importance of getting this matter befo e the laity was recognized by both the Clinical Congress of Surgeons of North America and American Association of Clinical Research, in adopting resolutions and appointing committees to undertake a campaign of publicity to bring this matter to the attention of society at large, and to write articles for the popular journals and weeklies.

This method of teaching the public seems to have done good in disseminating knowledge concerning tuberculosis, and it may be wise to do so in regard to cancer.

But still, much harm may be done unless these articles are written by very conservative men, for we may develop a cancero phobia, which might be more injurious, to the women, particularly, than phthisisophobia. But I must leave that for a further paper.

There is no doubt but what in many cases, probably the larger number, that an operation must be done in the precancerous stages, before all of the classical symptoms have appeared. In fact in many cases, to be successful, particularly in carcinoma of the stomach and intestines, we must operate before we can make an absolute diagnosis.

Since Cohnheim advanced his theory of tumor formation, viz: that tumors, including cancer, were formed from a matrix of embryonic cells or cell inclusions, we have made very little advance in the knowledge of the true nature and cause of these growths. To understand fully the formation of cancer one must understand the derivation of cancer cells.

Cancer is the atypical proliferation of embryonic epithelial cells, and can only arise from epiblastic or hypoblastic tissues and there is no transmutation of one cell into a cell of a different type. The epiblastic layer of the embryo gives rise to the skin, hair, nails, the cutaneous glands, those of the mouth, the lens of the eye, the lining of the mouth, the nasal passages, and the labyrinth and the brain and the central nervous system, including the spinal cord. The hypoblastic layer forms the lining membrane of the intestinal and urinary tract, and the glands of the lungs, liver pancreas, thyroids, and kidneys.

The mesoblast furnishes the frame-work of the body, the bones, muscles, nerves, connective tissue, serous membrane, the vascular organs, lymphatics, thyroids and spleen.

There is no transition of type, but the

differentiation of all cells takes place in the embryo. So also in tumors.

We never see carcinoma in the muscles—that is, originating in the muscles, though a carcinoma arising from epiblastic tissue may by growth seem to involve muscles or bone by its growth into such tissue. Senn added to Cohnheim's theory, traumatism, defining carcinoma as caused by congenital or post natal epithelial inclusions, these being embryonic cells, and stimulated by irritation or traumatism. Ribbert in 1911 advanced this theory: that carcinoma originates as a result of sub epithelial inflammation, which is caused by epithelial products and which diminishes the differentiation of the epithelium and liberates its proliferative growth.

The more it extends into the connective tissue the more does it lose its physiological connection with the original epithelium, and the more does it shut itself off, becoming transferred into independent parasitic cancer epithelium.

Ribbert excludes absolutely a parasitic cause. He insists that without any inflammatory changes in the connective tissue, epithelial proliferation cannot occur. He believes that infiltration of the connective tissues precedes epithelial invasion, this inflammation or infiltration being due to irritation from material generated upon or on the surfaces, for instance, of the skin, or intestines, and absorbed; that is, the absorbed metabolic products cause inflammatory changes in the connective tissue, this being really a pre cancerous stage. We see in warts a proliferation of the epithelial cells, but there is no invasion of the connective tissue until irritation occurs. Then inflammation occurs, breaking down the resistance of the connective tissue, at the same time increasing the proliferation of the epithelial cells, and consequent invasion of the connective tissue.

The irritant may be chemical, bacterial, mechanical, or electrical. Practically in all cases we must have trauma or irritation of some nature.

Cancer of the uterus occurs practically always in women who have had children, and even in those who have not conceived, in case of cancer, we can usually get a history of a dilatation, or something which has caused trauma or irritation.

Primary carcinoma of the liver to my mind is usually caused by gall stone irritation, and I think the feeling is growing among abdominal surgeons, that gastric carcinoma, in a large majority of the cases, is caused by a preceding ulcer, even though that ulcer may have been healed many years before, and the patient have nothing but a scar. But upon that scar a cancer is often grafted by cell inclusion, from inflammation or irritation taking place. The very positive effect of trauma shown is in the chimney sweeps carcinoma, and the fact that in 100% of cases of cancer of the tongue, the patient is either a smoker or chewer of tobacco.

Cooley cites 120 cases of breast cancer in which trauma was a factor in 43 per cent.

Neeves reported that in a study of 1720 malignant tumors, 848 were cancer of the thighs or abdomen, caused by the natives of Kashmir carrying charcoal burners under their aprons against the abdomen and thighs.

I have seen three cases of cancer of the breast following a single blow upon the breast;in one case three weeks previous, in another nine weeks, and in another about five months. The last and the first case were unmarried women. The last case died metastasis within eleven months after a most complete removal of the breast and glands, and I have operated upon the other two for recurrences occurring within a year after the original operation. The original tumor in neither case was larger than a walnut.

In cancer of the penis, irritation from a very tight prepuce is probably the exciting cause. In a case I saw just recently the man had a very pronounced phimosis, being unable to expose the glans, in fact he never had been able to, and without any other source of irritation except that of the retained secretion he had developed a rapidly growing epithelioma of the glands.

There has been much discussion as to the part played by heredity in the causation of carcinoma. Cullen states that in only 19 per cent. of his cases did heredity show an influence on the development of uterine cancer, but the majority of writers think otherwise. In my own practice I expect to get a history of carcinoma in the antecedents of the patients in at least 80 per cent.

It may be that this is merely a coincidence but undoubtedly it is seldom but what I can find cases in either parents or grandparents, who have died of carcinoma, oftentimes undiagnosed, however. Patients will often say that there is no cancer in the family, and yet by close questioning you can get a history as I did in one of my cases. The woman insisted that she knew of no cancer in the family, and yet I had operated upon a sister myself for uterine cancer and before she left the hospital she had told me that her father had died from an ulcer on his face. About six months later I met her family physician, and he told me that her mother had died from uterine cancer, though the family called it "change of life."

I believe the weight of evidence is op-

posed to the parasitic theory of carcinoma. Many reasons have advanced why carcinoma is caused by a germ, but so far we are in as much doubt as ever.

So-called cancer houses, in which several cases have occurred without relationship between the patients, have been found. In a case that I know of in a settlement of this country, there has been an unusual number of cases of malignant growths. In one family I operated upon the wife of a gentleman whose mother died from cancer. His wife came from another section of the country, with no clear history of cancer in her family; she died after having recurrences and the husband remarried in about two years. This second wife came from some miles away, and she had no family history of cancer; she developed cancer but is still living. This man's sister-in-law, living on the next farm, also died from cancer about the time of his second marriage. Why these people should show as many cases of cancer is very strange, for there are no local conditions that would explain it. Many kinds of parasites, coccidia, etc., have been found in carcinomas, but we are yet in as much doubt as ever as to the relation to the growth. One of the most striking advances in the study of the parasitic origin of malignant growths, is that of Rous, who recently has been able to reproduce sarcoma by the injection of sarcoma juice free from tumor cells.

Recently a great deal of attention has been given to plant tumors and the possibility of solving the problem through a study of them. From the supposed resemblance of these so-called plant cancers, many think that it is undoubtedly proven that human cancer must be caused in the same way, but while their similarity in appearance is striking, it does not prove that point.

Plant cancers differ very much in different trees and plants and are caused by different bacteria.

Many of you have seen the cuts published recently in the Geographic Magazines and in Surgery, Gynecology and Obstetrics.

There is no doubt but what the sting of insects or the inoculation of various bacteria will cause an apparent rapid proliferation of the cells of the plant, causing the common oak gall, for instance. But may it not be that the irritation caused by the sting, or the inoculations, sets up an inflammatory stage, starting the increased proliferation of the cells and thus causing the tumor. We all have seen the irritation caused by a nail which has been driven into a tree, causing the tree to throw out new material and making a lump or tumor, the tree apparently attempting to cover it over, in fact this is one of nature's attempts to protect itself. And so it may be in a human cancer.

By traumatism and irritation, at times by certain bacteria, or parasites, at present unknown, we may cause inflammation and this may stir into activity a latent embryonic epithelial cell inclusion, or even cause an undue activity of mature and normal cells, and an invasion of the connective tissue, this over activity being something in the nature of a forcing or hot house growth, causing rapid proliferation, none of these cells attaining their mature growth, this being then a true cancer.

Another objection to the theory of there being a germ of cancer is that we see carcinomas of different organs, each different in character, depending upon the different epithelial elements entering into the make-up of that particular organ.

We see in the breast different types of cancer, depending upon the arrangement of cells, and the amount and character of the intra-cellular substances and strama.

Metastasis in plant cancer are also referred to as similar to metastasis in the human, but it has been shown that in the metastasis in the plant the parent growth is always connected to the metastatic growth by a thin fflament and that it is very likely an offshoot, whereas in human cancer this does not always happen, and as a rule there is no connection between the original and secondary growth.

Of course it would be a very bold person to say that cancer is not caused by a bacteria or a parasite, but in the light of our present knowledge it would seem more likely that it is not, at least directly so; but that they play a part in certain cases by causing the pre-cancerous irritation would seem most probable.

The Meriwether Hospital.

The Diagnosis and Treatment of Septic Lateral Sinus Thrombosis, with Especial Reference to the Post-Operative Treatment.*

By James W. Walters, M.D., Lynchburg, Va., Member of the Alumni Association of the Ex-House Surgeons of the New York Eye and Ear Infirmary, etc.

As we watch with interest the rapid advances which are being made in medicine we realize that the specialist must look beyond his specialty, and the surgeon beyond his knife, and all in unity endeavor to win step by step those still dimly illuminated and but partially explored fields of our

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broadening science. This may seem an inopportune time and place to discuss a subject so clearly and distinctly otological. It is not, however, sinus thrombosis alone upon which I wish to lay stress in this paper but upon treatment in the broad subject of sepsis. I will endeavor, therefore. to be brief and concise.

The symptomatology of Septic Thrombosis of the Lateral Sinus is that of rapidly developing septicæmia with local symptoms pointing to an infected ear or mastoid. In cases of acute or chronic suppurative otitis media, or post operative mastoid cases, a chill followed by a rapid rise of temperature with profuse sweating, especially if recurring, should make us suspicious of involvement of the lateral sinus, and more especially if the patient's condition is one of well being and general alertness in the interem. The difficulties of diagnosis arise chiefly from the occurrence of meningitis, cerebral abscess, or the presence of malaria in the patient. A pyelitis in a patient suffering from a suppurative ear condition is often misleading. These may, however, be excluded by elimination. Blood examination shows a comparatively low leucocytosis, a point which is often of differential significance. Positive blood cultures are found in a large per cent. of cases and when found are practically pathognomonic. Negative findings, however, are not proof that sinus thrombosis does not exist, for it is possible to have a sterile clot present which, of course, would not give rise to bacteria. This condition would not, however, come under the subject as presented. Upon these symptoms, together with the local manifestations in the ear, tenderness or lymphatic enlargement along the jugular vein, and sometimes intraocular manifestations, such as occur from retarded circulation or extension of the thrombosis to the cavernous sinus, a diagnosis may be clearly made.

Treatment may be considered under two equally important heads, operative and post-operative.

Operative Treatment.—Early, complete, and rapid operative intervention is the keynote of success. As I have heard Dr. Fred Whiting so frequently say, "Genius is the capacity of taking most infinite care," and here it is most truly needed. The operation should be complete, removing every vestige of diseased bone and thoroughly uncovering the sinus as far back as the torcular herophili if necessary to reach the posterior limit of the clot. The external wall of the sinus should be carefully cut away and the sinus cleared out until free bleeding is obtained from above, even though the clot has to be removed from within the torcular itself. The same thoroughness should be maintained below, extending into the jugular bulb. Except in rare instances the operation should be combined with resection of the internal jugular vein from its origin to a point just above the clavicle. This step of the operation should be done immediately upon the positive diagnosis of a septic clot, in the course of the operation, before extensive work is done about the sinus as it will materially lessen the possibility of dislodging emboli. The entire wound should be treated as a septic wound.

Post operative Treatment.—With but few exceptions the problem before us in the post-operative period is that of the treatment of general septicæmia. There is no condition which confronts us, in medicine or surgery, where the otologist and the general surgeon are brought more closely together than as we watch and treat sepsis. Whether it has its origin through the mastoid and lateral sinus or from an infected uterus or appendix the same picture and the same problems confront us in a desperate struggle between the continued growth and virulence of the infective organisms on the one hand and body resistance and nourishment on the other. With infective organisms free in the blood stream in closest contact with their destroyers, polymorphonuclear leucocytes, here is the battle ground and here the victory or defeat after the surgeon has entirely eradicated the origin of infection. The comparatively small leucocytosis is one of the distinctive features of septicæmia and its increase the most hopeful omen. As I have watched day by day a large number of cases of sepsis under varied forms of treatment, the keynote of success has always been nourishment and a digestion undisturbed by too frequent medication. The dislodgement of a clot has been the cause of sudden death in patients weeks after operation and after the patient had apparently almost entirely recovered. For this reason, as in all cases, there is an area of blood clot in the vein below the point of ligation, and in a large per cent. free bacteria in the blood stream or possibly metastatic foci have already formed, absolute rest in bed under most rigid restrictions for a period of three or four weeks is of prime importance. In cases which were of streptococcic origin we have used large quantities of anti-streptococcic serum. And as I have watched for results only met with disappointment. I became skeptical, and as I visited other large institutions in New York City I found that I was not alone in my skepticism, for many institutions had practically abandoned its use.

In some cases I have used homologus vaccines and have seen enough seemingly

good results to encourage continued efforts but by no means enough to enable me to endorse or condemn them. In the spring of 1910 my attention was drawn to the work of Prof. Philip Hiss, of Columbia University, upon Leucocyte Extract. The theory appealed to me, and as I saw and heard more of the results of the use of this extract I determined to try it. The brilliant research of Metchnikoff has already focused attention upon phagocytosis and the action of the various cells taking part in scavenging and removing foreign bodies and organisms from infected animals and man. To be able to furnish an infected patient with just the weapons it most needs to fight infection seemed far from illogical, especially when such brilliant results were being reported. At first we prepared our own leucocyte extract and afterward through the courtesy of Prof. Hiss we obtained it from his laboratory. The description of the technique of the preparation of the extract as given by Prof. Hiss is as follows:

"The leucocytes have been obtained for the most part by double plural inoculation with aleuronat and the amount obtained after twenty-four hours from rabbits has usually been from thirty to sixty cubic centimeters of turbid, often blood-stained fluid. This has been quickly centrifugalized and the serum decanted. The cells then at times washed in normal salt solution, or directly subjected to the extracting fluid, which is added in amounts about equal to the fluid drawn off. The extracting fluid used was distilled water, in which the leucocytes were thoroughly emulsified and allowed to stand a few hours at 37.5° C., and then at ice-box temperature until used."

We used this extract in every type of infection with results which were gratifying. Many cases recovered, while in others it prolonged a hopeless struggle.

I will cite two illustrative cases.

Case 1.—A young man aged twenty-five entered the New York Eye and Ear Infirmary in July, 1910, with a diagnosis of acute mastoiditis of three weeks standing. Infection streptococcus mucosa. Immediate operatian was advised. Assisted by Dr. Charles F. Walter I cleared out the mastoid, explored the lateral sinus and cleared away the septic clot from the torcular to the jugular bulb. Also resected the internal jugular vein from its origin to a point just above the clavicle. Examination of the blood clot also showed streptococcus mucosa. For a week following the operation the patient continued to run a septic temperature with no tendency toward improvement. In addition to the free use of salt solution, which we were then using, we began with leucocyte extract 10 c.c. every second day. In a week there was marked improvement. We continued the extract for two weeks. Patient made an uneventful recovery.

Case 2.—A young man aged thirty-one came to the New York Eye and Ear Infirmary in August, 1910, with an acute suppurative otitis media. Streptococcus mucosa infection. On the second day he had a chill followed by a temperature of 104. We advised immediate operation. I operated on the patient assisted by Dr. Blodgett, of New York City. We performed a complete mastoid operation and drained a large epidural abscess. The patient's condition was such that we could not proceed further. The following day we explored the sinus to the torcular. The sinus was found filled with free pus. We did not obtain a free flow even after uncovering and opening the sinus as far back as the torcular and curetting a clot from within the torcular. The jugular vein was also resected. Pus from the sinus showed streptococcus mucosa. On the second day following the operation, the patient being violently septic, we began the use of leucocyte extract 10 c.c. on alternate days for one week, afterwards every third day for about ten days longer. Patient recovered rapidly and was completely well in six weeks.

These cases are only illustrative of the use of leucocyte extract as it has come under my observation. In general surgery equally good results have been reported.

All who have watched the slow progress of sepsis and have seen complication after complication arise realize the difficulty of stating with exactness the curative power of any particular remedy. The greatest hope of advancement in this line of work is in the co-operation of laboratory man and surgeon, and it is my hope that as we work still more light may be thrown upon this—a field where every success means a human life.

801 Church Street.

Pediatrics a Specialty.

By Dr. Clarence A. Rhodes, Atlanta, Ga., Adjunct Professor of Medicine, Atlanta College of Physicians and Surgeons; Attending Physician Wesley Memorial Hospital, Physician-in-Chief Wesley House Free Clinic for Children; Physician-in-Chief to the Atlanta Child's Home; Attending Physician City Hospital for Contagious Diseases; Associate Attending Physician to The Home of The Friendless.

The time has arrived when the general practitioner can no longer claim that pediatrics is not a specialty but a branch of general medicine. It is true that pediatrics is not a specialty in the same sense that ophthalmology and otology are regarded as specialties, since they refer to special organs

of the body; but in the broader sense, that pediatrics deals with all the organs of the body but limited to the period of infancy and childhood. A special branch of the general science of human life devoted to the interest of a special class, the most helpless and appealing of all, and includes many kinds of inquiry into the normal and abnormal child. Diseases occur in all periods of life but the manifestations are vastly different in the child than in the adult; so to become familiar with diseases in children requires special study and application. Diagnostics as applied to infancy and childhood differ materially from that in adults. In infants and young children symptomology is largely objective and physical signs must be interpreted in accordance with anatomic and physiologic conditions to age and development.

It must be conceded that nutrition, dietetics and treatment in infancy and childhood is peculiarly a special study, inseparably united with the broad subjects comprised under the heads of hygiene, sanitation, sociology, economics, humanitarian and philanthropic; each of these factors must be realized and reckoned with by the pediatrist.

The physician who would effectively and honestly practice in this important field of medicine must become a medical sociologist and economist. Economic and social problems should claim a large share of his attention, it is his duty to gather data for such investiffations. Of what value are statistics of factors or combination of factors regarding pediatrics when compiled by those whose observations have been limited to the sick children, while investigation of environments have been wholly negiected or of only a superficial nature? Of what value are deductions from such statistics to uplift humanity, which should be the guiding star of all medical investigation?

The pediatrist must have a thorough knowledge of dairy chemistry, of dairy and animal hygiene, because from this source is derived the sole food supply for a large percentage of those intrusted to his care. A technical knowledge of these subjects is fundamentally necessary for the intelligent modification of milk, and without this knowledge success cannot be assured.

The pure milk problem should be of vital importance to all pediatrists, as this is one of the most important fields of our work, but we find too few who are making any effort to better the milk conditions in their various cities or communities, and this is one of the main reasons why pediatrics is on such a low plane in our Southland; simply because our pediatrists are not bearing the burden and doing the work they should along pediatric lines.

Not until the pediatrists are willing to stand boldly to the front and fight for the recognition of our specialty, will we receive the recognition which should be ours to enjoy. It is our duty to see to it that the medical schools of the South take a more definite stand for pediatrics, and encourage them to fill the Chairs of Pediatrics with progressive men, and men who take pride in their specialty; and in this way raise the standard of our specialty. No branch of medicine has made greater strides forward during the last decade than pediatrics and it behooves us who are laboring in this field to herald the advances of our specialty abroad. It is no secret that our general practitioners and many of our so-called specialists are deplorably ignorant of pediatrics, especially of that most important part of it, the management of the young baby, and most of our schools at the present time pay very little attention to this the most important part of pediatrics. The infant should receive our first attention, as it is only by scientific care of these that the nation will develop into an all-round manhood, and nothing is of more importance than this man in the making whose well-being should be the concern of every pediatrist.

Infant mortality as high as it is today is a blot on our civilization, and it behooves the pediatrists to use their influence to remove this blot. This is indeed a fertile field and one in which we can accomplish much good for the parents, for the State and for the nation, if we will only arouse to our responsibility and shoulder the burden and organize and push the Child's Hygiene and Welfare Movements in our several communities. The laity must be educated to the importance of these movements, and as a rule have responded nobly with their substance to help all movements which have for their aim the betterment of the conditions of the infant and child.

According to some authorities, 17 per cent. of infants deaths are caused by congenital troubles. Is it not worth while to study these troubles and try to obviate them? The baby's life and pathology beg'ns nine months before its birth. This is just one other phase of pediatric work which should claim our attention, and thus we could mention many, but it is the aim of the writer to just bring a few things in pediatric work to your attention which makes it stand out as a specialty of the first order and not a department of general medicine as claimed by many,

Chondro Multilocular Cystoma; with Report of Case.

By P. H. Faucett, M.D., Columbia, Tennessee.

The rarity of this loculated mixed cystoma occasions at least a report; for from observation, study and the resource to modern literature. I find such tumefactions, or cystic degeneration hardly more than referred to as late as 1909.

Thus the pathology I find for such growths is meager. The reports show that they are more or less benign than malignant, and when removed seem to have no tendency to recur.

The location of these tumors is found in both the upper and lower jaws, or strictly speaking, they arise from the alveola process of these bones and from the enamel of the teeth.

I may say here that solid central epithelioma or adimantoma have about the same pathology, and are almost equal as to their rarity. Both these tumors have their origin in the enamel organ of the teeth and in the alveola process or structures.

The latest and most authentic report I could find was by Perthes in Eisendrath's Surgical Diagnosis; he having collected only fourteen cases up to 1909. Nine of these cysts affected the lower jaw and the upper having the remainder, so we find this condition about twice as frequent in the lower jaw as in the upper.

Dentigerous cysts must be differentiated from this form of cysts, though usually from sarcoma, and are most often seen between the ages of eeven and fourteen, appearing with the completion of their permanent teeth.

This multiple cyst may, as I say, be the only one occurring in the jaws. The surface of these is often quite thin and parched like.

For differentiation I will say that neither simple or dentigerous cysts ever attain the size of these multilocular cysts. These latter tumors grow slower than do those of sarcoma and cause really less irregular expansion of bone and a discriminating feature is that it leaves the mucosa intact.

The reason I am drawing a few comparisons for differentiation, is that these cysts grow to enormous size sometimes and when the wall is tense,—so much so as to discard fluctuation. When palpating and from the appearance and size, sarcoma may be suggested and accepted and the poor sufferer given no encouragement and left to be consoled only by narcotics and the patent medicine nostrums.

I fear I am departing from my subject, for in reality this was supposed to be only a case report, but to bring out a discussion I have simply supplemented my reports with this meager history, pathology and the surgical significance of this form of growth.

Case Reports.

Woman, age 35 years.—Her attention was called to a small enlargement of the jaw twelve years ago. After several months she noticed that it was growing and displacing her teeth inwards,—so she consulted a physician and removal was advised. The growth was removed,—this being eleven years ago.

Patient stated that at that time growth was about the size of an English walnut; had given her no pain nor inconvenience, though it seemed to be growing rapidly.

About ten months ago she noticed it was returning, and after a few months it grew rapidly, though she felt no pain, had had no bleeding and when she consulted me there was no evidence of its having become ulcerated.

At the time of my first examination I couldn't elicit any egg shell crackling but she said she had felt it very plainly some months before. Her reasons for consulting a doctor were for the pain she was suffering; neuralgia from the infra orbital nerve from pressure. I advised operation after examination, but was refused; patient stating all she wanted was something for her headaches.

Probably after going the rounds, as these patients ordinarily do, she came back to see me the latter part of February, suffering from pressure symptoms greatly. Her eye was bulging, ear prominently standing out, making the face look quite distorted. I advised operation for relieving the pressure though I did not feel that I could promise her much,—only that.

At this time there was no ulceration of the mucous membrane, though the two lower molar teeth were markedly pressed inwards, lying almost horizontal. I feared epulis or the giant cell—sarcoma. Patient consented to operation.

The incision was made along the horizontal portion of the jaw and after pressing everything down to the sac, I pressed my finger most around it but was unable to move it toward the incision. The facial artery was retracted and left uncut so I had practically no hemorrhage, and as sarcoma is rich in stroma and blood supply I was greatly enlightened.

After failure to deliver the cystic growth as it proved to be, I inserted a tube and drew off the contents of the larger one. The smaller ones were split and the whole sac was pulled through the opening of the skin and cut away down almost to the bone and

through the bone, chiseled to make as smooth as possible, the base of cysts was heavily curretted, and on the whole doing as complete an operation as possible without disarticulating; resecting the right half of inferior maxillary. The wound was partly sutured, that is, the upper half, and the resulting cavity packed with gauze. The gauze was removed forty-eight hours later and I had some granulating surface and the final result was, I believe, a good one. The cavity filled up and the fistula closed, and patient had but little disfigurement, both in scar and contour of face.

The ultimate result is:—whether or not there will be a recurrence or filling up again of this cyst. I really think not, though the lower inner portion of the expanding alveola process was left to keep the cheek from falling in as a cosmetic effect was desired if possible, and I believe I had good results, a grateful patient and without the mutilating resection operation.

Discussion and Conclusion.

Doubtless some may doubt the chroncroma tissue found in the growth, neverless it could clearly be seen and as the cartilagerous portion of the alveola processes made up a portion of the sac, I have called this cystic myoma a chrondro multilocular cystoma. The age of the patient discards the idea of dentigerous cysts, the history excludes sarcoma and the operation denies epulis.

This, to me, was a most interesting case and well worth reporting.

Significance of the Increase of Insanity.*

By G. F. Douglas, M.D., Assistant Physician East Mississippi Insane Hospital, Meridian, Miss.

In considering the Significance of the Increase of Insanity, I hope to take it up in a way that will be profitable to us as general practitioners the remarks of this paper being based principally on the etiological factors of insanity.

Considering from a general standpoint, the two main etiological factors of insanity are heredity and strain, and then judging from the standpoint of statistics and other reports, that insanity is increasing more rapidly than is the population, (that is, the ratio of increase of the two) it seems that the physicians and laity are paying this question too little concern. In nearly every biennial or annual report, which we see from the State and private institutions for caring for the insane, we find a great increase of admissions over that of two or four years ago. We find the ratio of increase of insanity greater than the ratio of increase of population. Some of this may be accounted for by the change of opinion of the laity concerning treatment and civic pride, as it has not been so many years back when people had a horror and antipathy for asylums, looking on them as places of detention, and where there were no altruistic feelings existing between officials and the patient, and patients one for another. Therefore, they would not consent for their people to be committed to such institutions until they become so offensive, troublesome and dangerous that the public at large interferred.

As civilization has advanced and people have learned the fundamental principle and purpose of such institutions, realizing that they are established to treat those who are sick in mind, they submit and agree for commitment much more readily than they formally did. This probably accounts for the increase in admission for some, but not all.

When we consider the statistics that some of the most noted alienists give us there is one insane to every 300 sane, (and this proportion increasing,) it seems we should begin trying to wage war against these etiological factors responsible for this increase.

We consider heredity as one of the great predisposing factors of insanity in many of its types. This being true, we should lend a helping hand to the Eugenist in his great work. A person who has inherited a neuropathic or psychopathic predisposition, needs all of the help available to prevent the break down, to which he is liable at any time when over-worked, or by other strains on the general system

In order that we may have a better conception of the real meaning of heredity with significance of increase of insanity, in brief, I will outline Mendels theory, which conveys the idea that the full development and normal faculties are greatly dependent on the presence of a special determiner in the germ plasm.

An individual may inherit this determiner from one parent, both parents, or may not inherit from either one. From the first type is known as simplex; of the second type duplex, and the third type nulpiplex inheritance. In the duplex, the individual has inherited the determiner from both parents, and is destined to develop a perfectly normal individual without any neuropathic taint, and is stable.

The simplex is where the individual inherits the determiner from a perfect mental development of one parent, and ordinarily it is claimed that the individual proves to be stable, on the basis that the normal disposition overshadows or conceals the neuro-

*Read before Alumni Society, University of Alabama School of Medicine, Mobile, Ala., May 4th, 1912.

pathic taint. In Mendelian terminology the normal disposition is spoken of as being a dominant trait, and the neuropathic disposition being a recessive one.

In order to illustrate these theoretical possible matings, Dr. Rosanoff, who deserves the credit for the following illustrations, states as follows:

1st. Both parents being neuropathic, all children will be neuropathic.

2nd. One parent normal, but showing neuropathic taint from one grand-parent, and the other parent neuropathic, half the children will be normal, but capable of transmitting the neuropathic constitution to their progeny, and one-half children will be neuropathic.

3rd. One parent being normal and of pure normal ancestry and the other parent being neuropathic, all the children will be normal, but capable of transmitting the neuropathic constitution to their progeny.

4th. Both parents being normal, but each with a neuropathic taint from one grandparent, one fourth of the children will be normal and not capable of transmitting the neuropathic constitution to their progeny, one-half will be normal, but capable of transmitting the neuropathic constitution and the remaining one-fourth will be neuropathic.

5th. Both parents being normal, one of pure normal ancestry, and the other with neuropathic taint from one grand-parent, all the children will be normal. One-half of them will not be capable, and half will be capable, of transmitting the neuropathic constitution to their progeny.

6th. Both parents being normal and of pure normal ancestry, all the children will be normal, and not capable of transmitting the neuropathic constitution to their progeny.

Of course we realize the above illustrations are theoretical, but probably it may help us to appreciate more clearly what heredity is and to what it amounts as an etiological factor of insanity in conjunction with the significance of increase of insanity.

There are three types of strain which predispose to the deterioration or breaking-down of the physical economy. These are, first, physical; second, physiological; and third, moral.

Under the head of physical strain comes the long hours, over work, and little sleep. When we consider the patients in insane hospitals, we find a great many who have broken down under these conditions, but the great majority of patients who come under this category will on investigation be found to have a hereditary predisposition, which has rendered them susceptible to this break, (and these circumstances of life often lead to some of the moral causes of insanity).

Under the head of physiological causes we see more female than male victims, due to the greater strain which comes upon them during puberty, pregnancy, puerperal state, lactation and the menopause. But were it not for that predisposed or prepotent factor "heredity" we would not have to face this great calamity in so many cases. Under ordinary circumstances, the individual may be able to stand these strains of life (even though she or he has been bequeathed that hereditary predisposition) without any serious mental aberration, but when the great strain comes, they are not able to endure it, and retain a normal mentality.

In many cases, we are unable to find any immediate or direct heredity as an etiological factor in this mental aberration, but when we begin tracing back the first, second and third generation, we learn of some idiot, imbecile, or feeble-minded relative, (one or more generation may be exempt or skipped). Of course there are some sporadic or accidental cases, or in other words, cases in which there are no history of insanity which have become demented from various causes, but there is such a great per cent. traceable to heredity, until it seems, that to do justice to ourselves and our great commonwealth, we should at least substantiate some of our eugenists' statements as best we can, and try to impress the significance of heredity in the increase of insanity.

In a study made in the Vineland Laboratory, N. J., of two thousand school children, three per cent. of the first five grades were found to be feeble-minded. When we think of the three per cent. being mentally perverted, even though they had not reached the age of adolescence, it seems appalling. Without statistics to show the per cent., which came from feeble-minded parents, we can readily appreciate the significance of the increase of insanity in this instance relative to a hereditary predisposition.

Some alienists claim that one-fourth to one-half of the insane have hereditary taint.

In consideration of the moral causes of insanity, and the significance thereof, we think of the "drink and drug" habit. In this day of development of civilization, of progression and aggression, we are made to feel that among the many uses of our drugs and alcoholics, there is much abuse and mis-use, ultimately leaving the decrepit bodies and mental aberrations, which not only affect the habituæ perse, but it is transmitted in the germ plasm to act and show

as stigmata of degeneracy in his or her heritage.

We will consider briefly the intemperate use of alcohol as significant in the increase of insanity. This can be considered as a direct and indirect cause, and an inherited effect of alcohol.

Under the head of direct cause of alcoholic insanity, we have cases of mania, a Potu, or delirium tremens. This type is one which the general practitioner has to treat mostly, as it is acute in duration, and such being the case is not often committed to an insane hospital, unless the patient stays on a continuous drunk.

Kraepelin reviews the statistics of the psychiatrics clinic at Munich for the year ending 1905. Among 1373 persons admitted 30 per cent. of the patients were suffering from psychoses due directly to alcohol, and 6 per cent. of the female cases from same cause (it may not be that we have quite so much in this country).

From 1903 to 1906 Danvers Insane Hospital showed an increase of alcoholic insanity as follows:

	Alcoholic Male Cases	Both Male & Female
1903	19.8 per cent.	12.6 per cent.
1904	18.9 "	13 "
1905	23 "	14 "
1906	25.6 "	15 "

Here we see that the increase in cases for 1906 over 1903 is 6 per cent., and over the average for a period of five years, before that, the increase is 12.6 per cent. for the male.

The above figures are claimed to have been compiled accurately. Some claim that there is more or a greater per cent. of alcoholic insanity than this, and some claim less. Alcohol acts as a contributory cause of insanity in many instances, and it is claimed to be hereditary in many cases, as are many of the other forms of psychoses. "The causes of drinking are intimately varied, and infinitely bound up in the heart of man—at once the expression of his strength and his weakness, his success and failures."

Among some of the other drugs which are etiological factors of insanity, we may mention morphine, that drug which has done so much to alleviate the sufferings of mankind, and which is like the sea, "fascinating and treacherous," while rendering its physiological effects it carries the habituæ into the grandiose stage, but when the effects begin to wane, leaves him with pain, both of body and mind, which will not be borne unless the patient is confined where it is almost a matter of impossibility to procure the drug. The number of persons who are addicted to this habit are many and those who are treated and stay off "dope" are few.

Some of the other drugs which are necessary evils (sedatives) we mention cocain, bromide, etc. Cocain is causing a great deal of insanity nowadays. It is seen more often in the negro race than is morphine; owing to its stimulating and exhilarating effects, they often buy it instead of morphine.

It has gotten to where it is not an uncommon occurrence to hear of a homicide, which was committed while the criminal was under the influence of cocain. I merely mention this to make us think of the significance of increase of insanity, caused by hypnotics, etc.

In many instances we as physicians are too prone to administer the hypnotic, narcotic and sedative, in giving to some one who has chronic complaints, we are opening the way to a drug habituæ, and I am sorry to say, there are but very few habituæs who are willing to give themselves credit or discredit for being an habitue, but are prone to censure his or her physician as being the cause of their down-fall. In a great many cases, I guess they are justifiable in doing so, as it is so easy for us to give a hypodermic of morphine or write a prescription for some of the bromides, e.g., bromidia, etc., with the result that when we see our patient at some future day we find them suffering with a toxic mania. I mention this to make us think and "ponder well" over the "necessary evils," sedatives, etc., as we administer them.

In considering the moral causes of insanity, or in other words, the immoral causes, we may mention syphilis. There was never a time in the history of the world when there was so much insanity caused by the later stages of luetic infection as today. The prevalence of this vice should arouse the sympathy of all physicians to the extent that they will render advice to the immoralists on every occasion, when he can hope to accomplish any good, for the sake of preventing so much mental aberration if for no other reason, for this disease is conducive to the nervous, mental, physical and moral degeneration of the human economy. We find a great deal of general paresis and dementia to which syphilis can be attributed as the etiological factor.

There are many other things which might be mentioned as being significant of increase of insanity, which would be useless to mention in this paper. But we might think of the disease which we find so prevalent in the South, pellagra, with its significance in causing an increase of insanity. In most all of the biennial or annual reports which we receive from insane hospitals, most especially South of the Mason & Dixon

line, they show to have admitted a great many patients with pellagrous insanity. I mention this that we might consider all of the most potent etiological factors in the psychoses, which we have to contend with. There are many other factors which could be placed in this category, but in conclusion will refer to one of the most cardinal etiological factors in the cause of the increase of insanity, above the increase of the population, the proportion one to the other, and that is heredity.

Knowing the significance of heredity in the increase of insanity, we should cooperate more closely with the eugenists, and try to get the co-operation of our legislative bodies, for "United we stand, divided we fall." And we are dragging a lengthening chain in psychiatry;the States help in the increasing number of unfortunates "at the foot," but too little is being done for the prevention of such a multitude coming over the top of the precipice. This is applicable to both classes, those who are mentally defective due to heredity, and the class which is demented as result of the drinking and drug habit, other vices, etc. We most earnestly covet the day when we can proclaim to the world that "Sentimentalis n has about run its course and experience is now allowed to have its legitimate sway."

Eye Complications of Malaria.

By Eward E. Gibbons, M. D., Surgeon Presbyterian Hospital, Baltimore, Md.

Ocular complication in Malaria are rather infrequent and unless the patient gives a distinct history of chills and fever the true cause of the disease is often overlooked I have seen a number of cases of obstinate cilliary asthenia, amblyopia and low grade optic neuritis especially, among other conditions in which the etiological factor was apparently very obscure until the plasmodium malariæ was discovered in the circulation. It is said that such eye complications are very common in the tropics and especially associated with the estivo-autumnal variety of fever. According to Marchiafava and Bignami the parts of the eye most frequently affected are the retina and optic nerve. The eye lesions caused by acute malaria are somewhat different from those associated with the chronic form and I will first speak of them. Amblyopia is relatively frequent, being as a rule intermittent and temporary. Before the advent of the opthalmoscope such cases of malaria with faulty vision were called Amaurotic Pernicious Fever. Many of these cases recorded were evidently not of malarial origin, affirmed solely by the fact that they were associated with malarial fever and that more or less of a cure followed the use of quinine. Cases of amblyopia are encountered more frequently during an attack of estivoautumnal or of pernicious fever and in such there are as a rule other evidences of disturbances on the part of tha nervous system. The attacks of blindnees are usually bilateral and last from ten minutes to as many hours. The defective vision shows itself during the initial chill and continuing through the pyretic stages passes off with the sweat. If the attacks are quotidian, coming on during the evening hours the case may be supposed to be of the nature of hemeralopia. In fact Stober and a few others reports cases of so-called malarial hemeralopia or night blindness. The pupils will be found dilated and very sluggish during the attack of amblyopia and there may be present an associated hyperemia and edema of the optic papilla. Malarial amaurosis is not always evanescent but may end in complete blindness due to atrophy of the optic nerve. The pathology of ocular changes in malaria was first studied by Poncet. The microscopic examination of the eyes of those who died during an attack of pernicious fever showed besides the characteristic appearances of acute optic neuritis with edema, infiltration with leucocytes containing black pigment in their centers and so crowded together as to have taken a polygonal shape. In the chorioid the vessels were enormously distended with pigmented leucocytes, Poncet wrote before the discovery of the mararial parasite Quarnieri in 1878 corrected certain errors then prevalent by demonstrating that the retinal capillaries contained only red corpuscles and these amoebæ and pigment deposits and not pigmented leucocytes at all. The capallaries contained red cells with plasmodiæ in advanced stages of development. In the larger vessels the red globules with adult parasites occupied the peripheral portion of the blood column just as described as occuring in other localities by Marchiafava and Bignami. The malarial amblyoria and amaurosis sine materia are probably caused by these mechanical alterations in the circulation in the retina giving rise to phygocytic stasis in the smaller vessels. Despagnet reported a case of blindness during an attack of malaria due to a generalized retinal arteritis. The sight did not return upon the malarial attack being cured. ¶Ki and quinine finally restored useful central vision but there remained a decidedly restricted field of vision. There is no doubt that numerous cases of retinal hemorrhage, the so-called hemorrhagic retinitis are due to Malaria.

The diagnosis of malarial amblyopia or

amaurosis is not usually difficult save in cases in which a doubt arises whether the blindness is due to the malarial infection or to quinine poisoning. In such a case certainty is necessary for in the one case pushing the quinine will cure and in the other blind. Quinine amaurosis could only be confounded with the permanent form of malarial blindness since the former has always a long course. An ophthalmoscopic examination will however always reveal the true nature of the case. In poisoning with quinine there is always a decided ischæmia of the retina and optic nerve. The arteries and veins are extremely attenuated; all traces of them may even be lost a short distance from the papilla. The optic disc from the onset is very white and its margins very distinct as in cases of optic atrophy. There are furthermore no evidences of retinal hemorrhages. Malarial amblyopia is associated with just the reverse condition. We find hyperemia of the fundus and papilla, optic neuritis and retinal hemorrhage or arteritis; a picture wholly unlike that of quinine amblyopia. In exceptional cases I have noticed narrowing of the retinal arteries but the veins are never attenuated, but more or less turgid with blood. Malarial amaurosis is of brief duration and frequenlty ends in complete restoration of vision unless atrophy of the optic nerve ensues. Quinine amaurosis runs a much longer course and while with appropriate treatment useful central vision is regained the field of vision for ever remains contracted so that whild the patient is able to read and write he is not in condition to safely go about alone. The opthalmoscopic picture remains about the same and the amount of vision slowly wanes parri passu with increasing atrophy of the optic nerve. Suppurative chorioiditis, iritis and cataracts are infrequently associated with acute malaria. A few such cases have been reported.

The eye complication of chronic malaria are also found in the retina and optic nerve as retino-chorioiditis and optic neuritis. In the former there is peripapillar edema and venous congestion accompanied by numerous retinal hemorrhages scattered well over the fundus, small and punctiform in the periphery but large and irregular in outline about the optic disc. Poucet studied micropscopically the eyes of those dead with malarial cachexia. He confirmed the above findings but did not find any melanaemia in the retinal circulation but the retinal hemorrhages were associated with proliferation of the endothelial cells of the capillaries. In the chorioid the melanæmia was however distinctly noticeable.

Perhaps the most common eye lesion found in cases of chronic malaria is a low grade optic neuritis. The most frequent subjective symptom noticed is the marked oscillation of the vision during the course of the disease. Diminution as low as one-tenth may inprove within two or three weeks so as to reach one half and then to fall again after several days to one tenth or what not. The affection is always bilateral but does not begin at the same time in the two eves. The visual field remains intact or is at the most but slightly contracted concentrically and the color perception is normal unless optic atrophy ensues. Hemeralopia is very marked, that is the patient's vision is much worse in poor light. Opthalmoscopically the picture is somewhat characteristic in regard to the alterations present. The optic papilla is of a peculiar blackish-red hue, its outline indistinct, veins tortuous and the surrounding retina more or less opalescent. Sulzer lays great stress upon the peculiar color of the optic papilla as a diagnostic point. About eight per cent. of these cases end in optic nerve atrophy and complete blindness.

Bull reported several cases of so-called simple atrophy of the optic nerve from malarial cachexia, cases which had not been preceded by apparent inflammation of the optic papilla. I have among my records several cases of severe vitreous hemorrhage due to malaria and Von Kreis has described at least two such. Opacities of the vitreous humour are now and then caused by malarial infection, independent of any lesion of the fundus. The fundus of the eyeball in such a condition is seen as through a dense smoke but there is seldom present any localized area of vitreous infiltrate. Many of these cases are associated with supreorbital neuralgia and the usually anæmia.

Dendritis Ulcer of the cornea a superficial serpiginous ulcer which is characterized by its peculiar arborescent form is infrequently associated with the presence of the tertian or quartan variety of malarial organism in the circulation. In at least two-thirds of such cases in which a blood examination was made I was unable to find the plasmodium. The examination of the eye in dendritic ulcer of the cornea reveals a narrow whitish line or point upon the cornea conisting of a subepithelial exudate. This line of exudate is, with the aid of a magnifying lens, seen to be made upon of seperate points of infiltrate. At the end of several days branches from the line of ulceration begin to form either by sprouting of by new points of infiltrate beginning and growing into the line of ulceration. The appearance is then of a broad branch-

ing trough. The branching of the ulcer is beautifully outlined by staining with flouorescein solution. The trough finally becomes filled with debris and may projecl above the level of the surrounding corneal surface. Vascularization never occurs. There is rarely any associated hypopion or iritis as the ulcer is very superficial. If unchecked by treatment the ulcer spreads over the entire surface of the cornea untill the latter is rendered permanently more or less opaque.

Treatment consists in destroying the ulcerating area with the electric cautery, as soon as diagnosed. The cautery point should be held close to the ulcerating area and heated until a crackling noise is heard and this operation repeated at several points until the entire ulcer is cauterized. Atropine and bichloride solution (1.4000) should be instilled every four hours and in a few days the eye will be practically out of danger. The application of tinct. of iodine as advocated by so many has proven powerless in many cases in my hands to stay the diseaee.

In any case of the above described eye conditions of doubtful etiological factor one should have the blood examined for evidences of malarial infection and quinine administered. Quinine given hypodermically exerts a more decided effect than when administered by the mouth, especially in the chronic cases.

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Surgery of Malignant Disease of Mouth and Larynx.—Trotter says (The London Lancet) says that an important question to be decided in every case is whether the disease is to be attacked in a two-stage or a one-stage operation or that on the primary growth should be done first. In the great majority of cases there can be no doubt that the two-stage operation is necessary. The attemt to accomplish in one sitting the two very complete procedures can only lead to excessive danger to the patient or a risk of incomplete removal of the disease. The only exception to this rule is in the case of epilaryngeal tumors. Here the primary growth cannot be attacked until the glands have been removed, and on account of the situation of the growth the gland operation even cannot be done with any safety without a preliminary tracheotomy. As to the sequence of the two stages the following general rules are those upon which the author decides. If the primary growth is in such a situation and of such size that rapid union can be obtained after removal of it, then the first stage should be on the primary growth and the second on the glands. This is chiefly in early tongue cases. In such cases the whole treatment can usually be completed in a fornight. Where the primary growth is such that rapid union is not probable (e.g. where the jaw has to be divided) the gland operation should be done first. This has its special disadvantage in the danger of pneumonia of an extensve neck operation when there is an ulcerating growth in the mouth, but the special advantage is that the gland operation is much easier when dene first. Where the glands hinder access to the primary growth three courses are possible: (a) Gland operation first (glands very large). Tracheotomy is usually necessary. (b) Primary growth and and partial gland operations first (usually tonsillar cases). (c) Single stage operation (epilaryngeal cases). Where the primary growth or gland mass is of uncertain operability the one which is the more doubtful should be attacked first. The essential steps of the operation on the primary growth are as follows: Every operation for removal of a tumor must begin with a definite stage devoted to obtaining access to the mucoue surface of the tumor. This is usually a perfectly formal anatomical procedure which applies to all cases when the same region is affected. As soon as the tumor is fully exposed a systematic attempt must be made to disinfect the region, and during the subsequent removal of the growth every effort must be made to preserve the wound from contamination. The surface of the ulcer should be cauterized. the surrounding mucous membrane cleansed with alcohol and the region of the tumor packed off so that mucus is prevented from flowing into the wound. The tumor is then excised with the size and form of surrounding margin dictated by the nature of the nature of the case. The wound from which the tumor has been taken must be closed by suture and such other plastic procedures as are necessary should be carried out.

Of the many languages of the earth, English is, without doubt, the most copious, and the student of languages will welcome the forthcoming addition to our reference books on this subject in Funk & Wagnalls New Standard Dictionary, which, it is announced, will contain a vocabulary of 450,000 living terms—a greater aggregation of English words than has ever before been collected within the covers of a book.

During the past twenty years chemical science has advanced with great strides and the demands for harmless food preservatives have kept it constantly in the public eye. For this reason the editors of the Funk & Wagnalls New Standard Dictionary engaged as their experts in this science

Dr. Harvey W. Wiley, formerly chief chemist of the United States Department of Agriculture, and Dr. William O. Emery, chief of the synthetic products laboratory of the United States Bureau of Chemistry at Washington, D. C.

It is not generally known that much of old English—that is, many meanings of words formerly commonly current in England but now in lesser use—has been preserved in Ireland. Attention has been drawn to this phase of English speech by the recently published work of P. W. Joyce, whose "English As We Speak It In Ireland" points to many interesting survivals which have found permanent record in the New Standard Dictionary. To the revival of the study of Gaelic we owe also many new terms, and the names of many Gaelic heroes and heroines figure in Irish history that heretofore have never been recorded in a dictionary of the English tongue. But so prominent a place have these taken in modern literature that the editors of the New Standard Dictionary secured the assistance of Dr. Douglas Hyde as editor for this department in their forthcoming new work.

A dictionary does uot merely contain the dry bones of knowledge, as any one who cares to turn over its pages can easily prove. It is a work full of the gems of literature, art and science, ranged side by side in infinite variety. Especially is this true of the New Standard Dictionary, which is the work of more than 380 experts, embellished by reproductions of world-famous paintings and statuary. Apt quotations illustrative of the use of words, and drawn from classic literature and modern authors, to the number of 32,000, form one of the many distinguishing features of this new work.

The Intrauterine Recognition of Sex.—Pankow (Ztsch. f. Geburtsch. u. Gynak.) presents a study of attempts to differentiate the sex of the fetus in the last month of pregnancy, which is based on the supposition that the embryonic testicles, being glandular organs, secrete substances which may be demonstrated in the blood of a woman pregnant with a male fetus. The absence of this reaction would then tend to show that a female child was present. For this purpose the author employed the precipitin reaction which is based on the fact that the blood serum of experimental animals previously treated with vegetable or animal albumin, developed specific reaction products (precipitins) which when brought together with the albumin solution already employed gives rise to a precipitation. He first attempted to demonstrate whether with the aid of the testicular extract, differences could be shown between the male and female blood. It seemed as if the testicular juice when brought in contact with the blood serum of the same species resulted in a precipitation, and it was also found that the serum of a bull produced a more marked reaction than that of a cow. In another series of experiments made with guineapigs the intraperitoneal injection of testicular juice resulted in the death of the animals within twenty-four hours, owing to the toxic action of the same, but in every case where the animals were injected with material which had been previously inactivated, a marked lowering of the temperature occurred but otherwise there was no change. The author formulates his results as follows: Foreign testicular substances when injected intraperitoneally manifest an extraordinary effect on the animal organism. The toxic action is produced by the complement which, however, may be obviated by inactivation. By preliminary treatment with normal as well as with inactivated testicular substance, antibodies are formed in the blood of the experimental animal which produce precipitation with those of the serum of the first variety. The production of antibodies which are specific only against the serum of the bull, by producing treatment with testicular substance, has thus far not been possible. It is noteworthy that the direct contact of a solution of testicular juice with bull serum brings about a delayed, but well-marked reaction. Anaphylaxis is entirely without results in the attempt to differentiate ssx by the blood. Although the author's experiments are generally negative in their results, he believes that this is due to the fact that our methods of differentiating albumins are not sufficiently developed, but that when this is attained the difference in sex may probably be determined in the manner indicated.

Inhalations of Ozone in the Treatment of Diabetes.

Labbe and Perochon state that they have cured or have greatly improved a certain number of cases of diabetes by means of this method of treatment. The inhalations are given in daily seances of fifteen minutes each. It is supposed that oxygen in the naissant condition reestablishes the equilibruim between the production and the consumption of sugar in the organism.—La Press Medicale.

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SHOULD THE NOSE BE PACKED AFTER INTRA-NASAL OPERATION?

The question whether to pack the nose or not depends upon the character of the operation performed and the individual peculiarities of the patient. In a general way surgeons are packing the nose less now than formerly. What are the reasons? The answer is (a) that surgeons are finding fewer reasons for packing than formerly, and (b) that cases operated have been found to heal better and with fewer complications without the use of a pack than with it.

Packing of the nose with splints, cotton, gauze (sterilized or medicated), or what not has been practiced for the holding or splinting of parts in position, for instance, after operations on the septum; for the prevention of adhesions, that might otherwise occur between a turbinate and the septum; for drainage, as in the case of abscess of the septum; and for the prevention of post-operative hemorrhage which we have come to fear less now than formerly.

Hajek was one of the first to abandon, wherever possible, the use of a pack in the nose. Charles A. Parker in his chapter on after-treatment says "that the less the operated case is interfered with, the better." There is no doubt but that post-operative infections and other complications occur more frequently in cases where the nose has been packed than in those that have not. The citation of a single instance, among many, will illustrate the point. A case with badly deflected septum to the right, complicated with right-sided polyps and frontal sinusitis was operated after the Killian submucous method and then packed on both sides with sterile gauze. The operation was eminently satisfactory, so far as the right side was concerned, but to our surprise the patient developed a violent attack of frontal sinusitis on the left side which previously had been normal.

Although packing of the nose may be required in exceptional cases, it may be withheld in the vast majority.

The fear of hemorrhage has been the greatest factor, in the past, to prompt the surgeon to pack the nose. For the comfort of those who may be unduly apprehensive of post-operative hemorrhage, it may be advised that packing of the nose is very rarely necessary to control hemorrhage in otherwise normal cases after operations for the partial removal of the turbinates, for the removal of polyps and for the lesser operations upon the accessory sinuses. Some surgeons are even abandoning the pack after the submucous operation of the septum.

After any operation on the nose the patient may bleed profusely for some minutes (two or three ounces) when the bleeding lessens to about one ounce in one hour and progressingly less, so that the total amount lost in 24 hours equals five or six ounces. Very rarely, even in the most pronounced cases, does the bleeding exceed eight or ten ounces, which is, after all, not alarming. The amount of after bleeding from operations on the turbinates, the septum, or one of the sinuses where a pack has not been used, averages less than three ounces in 24 hours.

Although a pack is rarely used, it is advisable to plug a small piece of cotton into the nostril of the operated side, more however as a precautionary measure against infection than for the control of the hemorrhage. It is also well to observe a few precautions against post-operative hemorrhage, to-wit: Direct the patient to keep still and wait for about an hour or so after operation, before sending him home. Advise him strongly against exercises of any kind, that may quicken the pulse rate; against the use of stimulants, the eating or drinking of hot foods, stooping forward and the wearing of a tight collar about the neck. Advise him rather to keep quiet, in a semi-recumbent position, to take nothing but cool liquid diet, and above all not to worry over a bleeding attack amounting to less than two or three ounces. In 24 hours the danger of secondary hemorrhage is practically over.

Cases that bleed sufficiently profuse as to require a pack do not exceed one-half of those operated, and if one observes the precaution to keep his patient near him for an hour or two after the operation, he will not be likely to miss this exceptional case. Individuals who are particularly susceptible to hemorrhage should either not be operated at all, or operation should be postponed until such time that the patient has recovered from this susceptibility.

BREEDING MEN.

It has been truly said that the producer is the only one who really benefits mankind, for the reason that those who make use of the things already at hand to make something else out of are dependent upon the actual raw material that has been produced. Thus the quality and quantity of cotton or wool that has been produced will

determine the amount and texture of the manufactured fabric. So it is with humanity —the quantity and quality of the future generations are dependent upon the material now produced. The stock breeder is very careful as to what stock he breeds together, and even the poultryman breeds for certain characteristics. Why should not man be just as careful about his own breeding? You may teach, but if the quality of material is not there, if the foundation upon which to build is not present, you will accomplish almost nothing, while, on the other hand, it has been demonstrated time and again that wonderful things may be accomplished by children of obscure parentage, but in whom proper fundamentals exist.

Children compose the basis of society and if society is to be improved, it must needs be through the children. It is highly important that our children be properly instructed and led up to where they will at maturer years realize the great necessity of proper marital and other social relations. Love as a rule is confounded with emotion and even passion, but it is really a faculty. Marriages are too frequently the result of lustful passion—licensed debauchery if you please—not love. The outcome of this has been a frightful increase of certain diseases and especially nervous disorders. The increase of neurasthenia and insanity has been appalling of late years, and it is incumbent upon the physician to take this matter up thoroughly and urge upon the clientelle as well as the public the great necessity of breeding men-stock, as well as blooded horses, cows, pigs or chickens, the producing of men, noble and healthy, and not simply for them to bring into the world human beings as the accidental or ignorant result of sexual co-hubitation indulged in for personal gratification of passion. Teach man to wish off-spring and try to create in him a desire to develop his progency to its highest possible attainments, and then our educational facilities will do the rest.

As it stands today, the majority of human beings are trying not to have children, using many artificial means of prevention and of course this will interfere with the physical make-up and welfare of those following its practice. As it is with all creatures, it is natural that man should have off-spring, and if he does not, he is lacking in some qualities. What would a stock breeder do with animals that did not breed? He would consider them worthless. Those that he has rendered incapable of having progeny he has made thus for the purpose of feeding them to fatten and kill, or some other equally good reason. It is the duty of every human being, but especially the medical fraternity, to pay more attention than has been, not just to helping those who already are born to higher attainments, but also to endeavor to teach how to breed the proper kind of man stock.

Let us each do our duty!

THE MOSAIC LAW AS A PROPHYLACTIC MEASURE IN MEDICINE.

It is well to repair a machine after it is broken. It is good to be able to bring back to health a person who has been sick, but far better is it to be able to prevent a machine from breaking and a human being from becoming ill. It is with this idea of considering some ancient religious means of prevention that this paper is written.

At the present time the world is facing industrial and other crises, but there is no condition that is of greater importance than the state of health of humanity. Humanity is facing in the present hour the fact that insanity and nervous disorders are increasing at such an alarming rate as to cause the gravest concern in the minds of some of the best medical and other thinkers.

The farther man has gotten from the simple life, the weaker has become his constitution in certain ways. The laws laid down by Moses were the best that have ever been promulgated by any man in the past or in the present, and they meet such an astounding number of conditions that even a religious skeptic has to pause and wonder.

One of the noted cures of neurasthenia today is the Rest Cure. What did the Mosaic Law state? At least one-seventh of the time was to be given to rest. If the business man, the laborer, millionaire, or the factory girl would take or be allowed to take their seventh of the time for real rest, how much suffering, insanity, suicide and disease would be avoided! The working and living conditions were so arranged that when the Sabbath came each individual was able to rest. Today, after the week's work is done, we follow after things that are necessary or unnecessary which are sapping our strength. So here the Mosaic Law would be a great prophylactic measure, if observed in our day and time, against many unhealthy conditions.

The Mosaic Law of circumcision called attention to the fact that the sexual part of our nature required attention. Circumcision will be the means of preventing many diseases reflexly or directly. The nervous as well as the mucous organism is frequently benefitted by this minor operation, besides being a rational hygienic measure.

The cleansing of houses, even at times to the extent of burning them or destroying them otherwise, and the rigid inspection

given to the people who were involved in a disease would be a good thing for our present-day health boards to take notice of—and yet this law was that of thousands of years ago.

The washing of hands before meals, and feet after journeys were both well established laws or customs in ancient days, and how much disease today could be avoided if cleanliness were to be observed more! Of course the better class of people do clean the hands, but thousands of working men and women do not have the time or, take it, to cleanse themselves properly before eating a meal. The matter of the feet even should be taken into account today. Has it ever occurred to the mind of the reader that we wear our shoes for months at a time and they are never cleansed? The feet may be cleansed, but the leather is not, and then, too, the leather does not permit of a good circulation of air to the skin of the foot. Cooling fat baths would be an excellent fad to start and one with some sense to it. It is wonderful how a foot bath will revive a person. A cooling foot bath will calm a nervous person at times as well as a dose of bromides and be far less harmful.

The Mosaic injunction of man abstaining from carnal knowledge of woman at certain times and the penalties laid down for the non observance of this order tended to keep woman as well as man in a good, clean and healthy state without the use of syringes and other measures.

The writer would wish for more space to discuss this question more fully, but it cannot be at the present, but it is to be hoped that the reader may have some new thoughts impressed upon him that some modern investigators might well look up what the Good Book has taught and bring certain of its teachings into practice and realize that the Mosaic Law was a grand system of disease prophylaxis.

AN EXTRA-PHARMACAL THERAPEUSIS.

Many years have elapsed since that variety of animal popularly known to us as the *genus homo* was a far higher type than the present specimen, in at least many important respects. Ill-clad, hairy and clumsy though he undoubtedly was, nevertheless he evinced some very redeeming features.

Proudly—nay—even fiercely independent he was a veritable and living example of what Thomas Carlyle would call a *cosmic* man. Infinitely more cognizant of the due value of a rugged out-of-door existence he was enabled by the exercise of such knowledge to build up a bodily framework which could admirably withstand the buffetings of crude and elemental nature, wild beast and a less specialized civilization.

Nowadays how often do we see a glorious work unfinished or a life prematurely snuffed out because of an indifferent regard to the *man physical*. Countless, silent proofs are constantly beckoning, and beckoning imperviously, to a fuller enjoyment of fresh air and a pleasurable exercise therein. Mr. Douglas Argyll-Robertson, the great Scottish surgeon used to constantly say to his youthful acquaintance, "Young man, play golf!" Well did he realize the absorbing interest of that delightful pastime and its care-dissolving characteristics. And from all accounts this worthy apostle of out-door exercise and fresh air was one justly competent to back up his statement by proof. It was a moot point whether Mr. Robertson himself was a better hand at getting out a cataractous lens or holing out a long putt on the links! Here you see the reverse of what is called in our learned medical parlance 'a vicious circle.' With him the mutual inter-relation between his life work and his *re-creation* was of a most beneficent character—an ophthalmic surgeon by profession, a splendid golfer by predilection!

In choosing a suitable pastime—be it mountain climbing, tennis, golf or prosaic pedestrianism for that matter, the palpable interest which such exercise exerts on us mentally should always be carefully looked into and its character determined. In the choosing it will be disclosed that "what is one man's meat is another's poison." A proper choosing of the most thoroughly *re-creating* sport or one, in fact, which takes one out of himself, is most essential to each and every one. Then and only then is the psychological element assuredly operating. Then alone does the zest and love of the pastime render fairly migatory the outlay and tedium of physical expenditure of energy. Citations of the truth of this will be called to mind in gymnastic calesthenics to music which is being inaugurated in modern Y. M. C. A. work. It is after such pleasurable indulgence that sleep, appetite, and digestion are helped and the individual is in the process of future "hardening," provided the exercise is faithfully and fairly frequently performed. It was truly said of the illustrious Mr. Gladstone that the only recreation he ever experienced was a change of work. In this he was not unlike our own ex-president, Colonel Theodore Roosevelt. Gladstone is known to have attacked his Homeric odes, or the intricacies of his next budget, or the trials of a mountainous climb with a corresponding zeal and he always profited by it. By the daily exercise of these powers he added momentum to his already crescent mental and physical force and became as years went on a powerful and a still more powerful force.

As it falls on our shoulders to aid others in seeing what is best in our race through distracting modern life and if possible whip them into shape as fit human beings with sound minds and with sound bodies. The right sort of man should care for the generations to follow and the only way he can show his true interest is by a useful and carefully regulated and properly nurtured life of usefulness to those with whom he may come in contact.

Editorial News Items.

Preliminary Bulletin Sixtieth Annual Meeting Medical Society of State of North Carolina.

Morehead City, Tuesday, Wednesday, Thursday, June 17, 18, 19, 1913
10:00 a. m.

North Carolina Public Health Officers' Association, Third Annual Session, Monday, June 16, 1913, 9:30 a. m. Morehead City.

PREFACE.

This preliminary bulletin is sent out that each physician may be reminded of the approaching meeting; that he may pay his dues, if he has not already done so; that he may see if the report for his county society has been made; and to ascertain whether or not representation for his county in the House of Delegates, the business body, is assured. If he is to read a paper, he can make it conform to the rules of the Society. The names of the various State and county officers are given, so that any matter of business may be referred to the proper person.

A splendid program is being prepared, but this is not quite complete, so that it will be announced later, in the final program.

Every indication is that there will be a large attendance. The Norfolk and Southern, the Southern, and Seaboard Air Line will be glad to run through sleepers if notice is given by a sufficient number who would like to start Monday night and reach Morehead City Tuesday morning in time for the opening session. There is a regular sleeper leaving Greensboro at midnight and reaching Morehead City early next morning. It leaves Morehead City about 4 p. m. and reaches Greensboro for the early morning connections.

The North Carolina Public Health Officers' Association meets Monday, 16th, and has an attractive program. This will be issued with the final State Society program.

MEMBERSHIP IN THE STATE SOCIETY.

All members of the component county societies shall be privileged to attend all meetings and take part in all the proceedings of the annual sessions, and shall be eligible to any office within the gift of the Society.

No person who has failed to pay his dues through the secretary of his county society shall be entitled to any rights or benefits of the Society. He has no right to read a paper, to hold office, to receive the printed transactions, to vote, or in any other way participate in the deliberations of the Society.

SEC. 3. No person who is under sentence of suspension or expulsion from any component society of this Society, or whose name has been dropped from its roll of members, shall be entitled to any of the rights or benefits of this Society, nor shall he be permitted to take any part in any of its proceedings until such time as he has been relieved of such disability.

SEC. 4. Each member in attendance at the annual session shall enter his name on the registration book, indicating the component society of which he is a member. When his right to membership has been verified by reference to the roster of his society, he shall receive a badge, which shall be evidence of his right to all the privileges of membership at the session.

FINANCES.

Pay your dues through your county secretary.

Make inquiry to see that your county society is in good standing and its assessment paid. You should see that you are not debarred from the scientific and business deliberations.

Chapter XI of the State Medical Association:

ASSESSMENTS AND EXPENDITURES.

SECTION 1. An assessment of two dollars per capita on the membership of the component societies is hereby made the annual dues of this Society, which amount shall be collected by the secretary of each county society from each of its members on or before the first day of March and forwarded to the treasurer of the State Society before the first day of April in each year. The secretary of each county society shall forword a statement of its assesment, together with its roster of all officers and members, list of delegates and list of non-affiliated physicians of the county, to the secretary of this Society on or before the first day of April in each year.

SEC. 2. Any county society which fails

to pay its assessment, or make the reports required, on or before the date above stated, shall be held as suspended, and none of its members or delegates shall be permitted to participate in any of the business or proceedings of the State Society or of the House of Delegates, or receive the volume of Transactions, until such requirements have been met.

SEC. 3. All motions or resolutions appropriating money shall specify a definite amount, or so much thereof as may be necessary for the purpose indicated, and must be approved by the Council and House of Delegates on a call of the ayes and noes.

No reputable white physician can afford not to be a member of the State Medical Society. If you are not a member, join at once.

Have you paid your 1913 dues through the secretary of your county society?

Has your county society elected a delegate? If so, who?

Are the doctors of your county organized? If not, are you not partly responsible? Why not take the initiative?

ADVANTAGES TO THE DOCTOR OF MEMBERSHIP IN THE STATE MEDICAL SOCIETY.

1. The annual Transactions of the State Medical Society affords the only permanent record of the profession in the State.

2. The doctor's posterity may suffer disappointment, knowing he was a doctor, if a search of the records gives no information concerning him.

3. A referee for a life insurance company of this State remarked recently that a doctor had lost nearly one hundred dollars in fees in one summer simply because he had failed to pay his Society dues, and as a result had his name omitted from the list of doctors for his county as published in the Transactions. The insurance companies in rating doctors count good standing in his county and State societies as 50 per cent.

4. To every member of the Society a copy of the annual Transactions is sent, thus giving him a record of the result of the study, research and experience of the other doctors of the State.

5. Social intercourse brings about a better understanding and fellowship.

A county secretary should not have to beg a member to pay his dues or send repeated requests for them.

PAPERS AND DISCUSSIONS.

SEC. 4. No address or paper before the Society, except those of the president, orator, and essayist, shall occupy more than twenty minutes in its delivery; and no member shall speak longer than five minutes, nor more than once on any subject.

SEC. 5. All papers read before the Society shall be its property. Each paper shall be deposited with the secretary when read, and if this is not done, it shall not be published.

The papers should be typewritten on letter-size or legal-cap paper. Only one side of the paper should be used. The title of the paper, together with the name and address of the author, should be given on the first page. The other pages should be numbered at the top and carry the initials of the author.

"No voluntary paper shall be placed upon the annual program or be heard in the Association, which has not first been read in the county society of which the author is a member."

SEC. 3. The chairman of sections shall send in to the secretary, not later than thirty days previous to each meeting of the Society, the titles of papers to be presented by themselves and their assistants, to be used by the Committee on Scientific Work in making a program for the meeting.

SEC. 4. No paper shall be read before the Society unless the author be present, unless his absence be due to some unavoidable circumstance. A paper presented by proxy may be referred to the Committee on Publication.

SEC. 5. No paper shall be referred to the Committee on Publication until it has been placed in the hands of the secretary; and the secretary shall not return any paper accepted by the Society without the consent of the Society, and then he shall take a receipt for the same.

SEC. 6. No paper shall be received by or read before this Society that has been presented to any other society, excepting only a component society of this Society, or that has been offered for publication in any journal. In the case of any paper accepted, the author is supposed to have invested with the Society all rights to its ownership.

SEC. 7. No paper shall be published in the Transactions of this Society unless approved by the Committee on Publication; and any paper rejected by said committee shall be returned to the author through the secretary of the Society.

SEC. 8. It is to be understood that the Society is not to be considered as indorsing all the views and opinions advanced by the authors of papers published in the Transactions of the Society.

NOTE.—The titles and names of authors of volunteered papers should be sent to chairman of the appropriate section. See list of chairmen of sections below.

THE STATE BOARD OF HEALTH.

J. Howell Way, M.D., Pres., Waynesville.
Richard H. Lewis, M.D., Raleigh.
Edward C. Register, M D., Charlotte.
J. E. Ashcraft, M.D., Monroe.
David T. Tayloe, M.D., Washington.
J. L. Ludlow, C E., Winston-Salem.
W. O. Spencer, M.D., Winston-Salem.
Thomas E. Anderson, M.D., Statesville.
Charles O'H. Laughinghouse, M.D., Greenville.

W. S. Rankin, M.D., Secretary and Treasurer to Board.

John A. Ferrell, M.D., Assistant Secretaro to Board for Hookworm Disease.

C. A. Shore, M.D., Director State Laboratory of Hygiene.

"The elective members of the State Board of Health and of the State Board of Medical Examiners for Nurses shall be elected by the members of the Society in general meeting on the second day (Wednesday) of the session." The term of office for Board of Health members is six years.

At Morehead City, June 18th, elections for two members of the State Board of Health will be held. These offices are now held by Dr. J. E. Ashcraft, of Monroe, and Dr. David T. Tayloe, of Washington.

BOARD OF MEDICAL EXAMINERS.

The Board of Medical Examiners is composed of seven members, elected on the second day in the general meeting, for a term of six years. The next election will be held Wednesday during the 1914 meeting. The Board holds examinations beginning Tuesday of the week preceding the date of the annual meeting of the Society. For 1913 the meeting will be in Morehead City, beginning June 10th.

Two members of State Board of Medical Examiners for Nurses will be elected in 1915 to serve for three years. The present representation of the Society are Dr. A. B. Croom, Maxton; Dr. J. W. Neal, Monroe. The Board is composed of five members, three of whom are nurses elected by the Nurses' Association.

ELECTION OF OFFICERS.

SECTION 1. All elections shall be by secret ballot, and a majority of the votes cast shall be necessary to elect: Provided, that when only one name is to be balloted for, the House may suspend the rules and declare the same elected by consent.

SEC. 2. The House of Delegates on the first day of the annual sessions, shall elect a Committee on Nominations, consisting of ten delegates, no two of whom shall be from the same councilor district. It shall be the duty of this committee to consult with the members of the Society, and to hold one or more meetings, at which the best interests of the Society and of the profession of the State for the ensuing year shall be carefully considered. The committee shall report the result of its deliberations to the House of Delegates in the shape of a ticket containing the names of one member for the office of president and one member for each of the other offices to be filled at the annual session.

SEC. 3. The report of the nominating committee and the election of officers shall be the first order of business of the House of Delegates after the reading of the minutes on the morning of the last day of the general session.

SEC. 4. Nothing in this article shall be construed to prevent additional nominations being made by members of the House of Delegates.

SEC. 5. Any person known to have solicited votes for or sought any office within the gift of this Society shall be ineligible for any office for two years.

MEDICAL SOCIETY OF THE STATE OF NORTH CAROLINA.

OFFICERS 1912-1913.

Dr. J. P. Munroe, President, Charlotte.

Dr. F. R. Harris, First Vice-President, Henderson.

Dr. E. S Bullock, Second Vice-President, Wilmington.

Dr. L. B. Morse, Third Vice-President, Hendersonville.

Dr. John A. Ferrell, Secretary, Raleigh.

Dr. H. D. Walker, Treasurer, Elizabeth City.

Dr. H. D. Stewart, Orator, Monroe.

Dr. J. T. Burrus, Essayist, High Point.

Dr. J. H. Harper, Leader in Debate, Snow Hill.

CHAIRMEN OF SECTIONS

FOR 1913.

Anatomy and Surgery—Dr. Henry Norris, Rutherfordton.

Materia Medica and Therapeutics—Dr. M. A. Royall, Elkin.

Physiology and Chemistry—Dr. I. H. Manning, Chapel Hill.

Obstetrics and Gynecology—Dr. A. B. Croom, Maxton.

Pathology and Microscopy—Dr. J. A. Caldwell, Salisbury.

Practice of Medicine—Dr. J. F. Patterson, New Bern.

Diseases of Children—Dr. Yates Faison, Charlotte.

State Medicine and Sanitation—Dr. P. H. Ringer, Asheville.

Eye, Ear, Nose and Throat—Dr. J. G. Murphy, Wilmington.

BOARD OF COUNCILORS.

Dr. M. L. Stevens, President, Asheville.
Dr. K. P. B. Bonner, Secretary, Morehead City.

DISTRICTS.

First—Dr. J. L. Spruill, Columbia.
Second—Dr. K. P. B. Bonner, Morehead City.
Third—Dr. G. L. Sikes, Salemburg.
Fourth—Dr. M. M. Saliba, Wilson.
Fifth—Dr. W. P. Holt, Duke.
Sixth—Dr. R. L. Felts, Durham.
Seventh—Dr. A. J. Crowell, Charlotte.
Eighth—Dr. R. O. Dees, Greensboro.
Ninth—Dr. D. J. Hill, Lexington.
Tenth—Dr. M. L. Stevens, Asheville.

THE COUNCIL.

The council is composed of one councilor from each district. On the last day of the annual session of the Association it shall meet for re-organization and for outlining the work of the ensuing year, and at this meeting shall elect a president and secretary. Through its chairman it shall make an annual report to the House of Delegates. Each councilor shall make an annual report of his doings.

COUNCILOR DISTRICTS AND OFFICERS.

First District.

President .....
Secretary .....
Treasurer .....

Currituck, Camden, Pasquotank, Dare, Perquimans, Gates, Chowan, Washington, Tyrrell, Hyde.

Second District.

President .....
Secretary .....
Treasurer .....

Hertford, Martin, Pitt, Bertie, Beaufort, Lenoir, Jones, Craven, Pamlico, Carteret.

Third District.

President, Dr.....
Secretary, Dr.....
Treasurer .....

New Hanover, Pender, Onslow, Duplin, Bladen, Sampson, Columbus, Brunswick.

Fourth District.

President, Dr. W. H. Smith, Goldsboro.
Secretary-Treasurer, Dr. M. M. Saliba, Wilson.

Northampton, Halifax, Nash, Edgecombe, Johnston, Wilson, Wayne, Greene.

Fifth District.

President, J. W. Halford, Lillington.
Secretary, A. B. Croom, Maxton.
Treasurer .....

Cumberland, Robeson, Scotland, Richmond, Montgomery, Moore, Harnett, Chatham.

Sixth District.

President, Dr. F. R. Harris, Henderson.
Vice-President, Dr. C. S. Mangum, Chapel Hill.
Secretary, Dr. C. A. Woodard, Durham.
Treasurer .....

Wake, Franklin, Warren, Vance, Granville, Person, Caswell, Alamance, Orange, Durham.

Seventh District.

President .....
Secretary .....
Treasurer .....

Anson, Union, Stanly, Mecklenburg, Cabarrus, Lincoln, Gaston, Cleveland, Rutherford.

Eighth District.

President .....
Secretary .....
Treasurer .....

Rockingham, Guilford, Randolph, Forsyth, Stokes, Surry, Yadkin, Alleghany, Wilkes, Ashe.

Ninth District.

President .....
Secretary .....
Treasurer .....

Davidson, Caldwell, Davie, Rowan, Iredell, Alexander, Catawba, Watauga, Mitchell, Burke.

Tenth District.

President .....
Secretary .....
Treasurer .....

Buncombe, Yancey, McDowell, Madison, Henderson, Polk, Haywood, Transylvania, Jackson, Swain, Macon, Clay, Cherokee, Graham.

STATE SOCIETY DELEGATES.

AMERICAN MEDICAL ASSOCIATION.

Dr. J. Howell Way, Waynesville.
Dr. H. A. Royster, Raleigh.

Alternates:

Dr. W. L. Dunn, Asheville.
Dr. E. Reid Russell, Asheville.

SOUTH CAROLINA MEDICAL ASSOCIATION.

Dr. Arthur Guerard, Hendersonville.
Dr. Albert Anderson, Raleigh.
Dr. J. J. Phillips, Tarboro.

VIRGINIA MEDICAL ASSOCIATION.

Dr. H. T. Bahnson, Winston-Salem.
Dr. Oscar McMullan, Elizabeth City.
Dr. W. H. Smith, Goldsboro.

COMMITTEES.

Public Policy and Legislation:

NOTE.—If you have not already sent in your annual dues ($2) through your county secretary, do so at once, You should have paid before March 1st.

Dr. J. P. Munroe (*ex-officio*), Charlotte.
Dr. John A. Ferrell (*ex-officio*), Raleigh.
Dr. Albert Anderson, President, Raleigh.
Dr. L. B. McBrayer, Secretary, Asheville.
Dr. G. G. Thomas, Wilmington.

Publication:

Dr. John A. Ferrell, Chairman, Raleigh.
Dr. J. Howell Way, Waynesville.
Dr. H. A. Royster, Raleigh.

Scientific Work:

Dr. John A. Ferrell, Chairman, Raleigh.
Dr. Wm. DeB. MacNider, Chapel Hill.
Dr. Wm. Allen, Charlotte.
Dr. E. J. Wood, Wilmington.

Finance:

Dr. C. O. Abernethy, Raleigh.
Dr. H. M. S. Cason, Edenton.
Dr. E. T. Dickinson, Wilson.

Obituaries:

Dr. E. G. Moore, Elm City.
Dr. A. W. Knox, Raleigh.
Dr. M. L. Stevens, Asheville.

Arrangements:

Dr. K. P. B. Bonner, Chairman,
Dr. W. E. Headen,
Dr. C. L. Duncan,
Dr. David S. George,
Dr. B. F. Royal,
Dr. M. W. Ball,
of Cartaret County Medical Society.

Nominations:

(Named by House of Delegates, a member for each councilor district.)

Medical Defense:

Collection and Preservation of Records:

Memorial Exercises:

BOARD OF MEDICAL EXAMINERS.

Meeting, Morehead City, June 10, 1913.

Dr. W. W. McKenzie, President, Salisbury.

Dr. Benj. K. Hays, Secretary-Treasurer, Oxford.

Surgery—Dr. J. C. Rodman, Washington.

Gynecology and Obstetrics—Dr. L. B. McBrayer, Asheville

Anatomy and Pathology—Dr. W. W. McKenzie, Salisbury.

Practice of Medicine—Dr. H. H. Dodson, Greensboro.

Materia Medica and Therapeutics—Dr. John Bynum, Winston-Salem.

Chemistry and Diseases of Children—Dr. J. L. Nicholson, Richlands; Dr. Benj. K. Hays, Oxford.

QUESTIONS FOR THE DOCTORS.

Has any physician ever enjoyed a State-wide reputation as a professional man who did not take an interest in and attend the meetings of the State Society?

As a practical proposition, will you lose or gain practice if your patrons know your absence is for the purpose of attending scientific discussions of medical topics?

Is there anything you might learn from other doctors of experience which might increase your efficiency?

Think the matter over. Attend the meeting.

THIRD ANNUAL SESSION NORTH CAROLINA HEALTH OFFICERS' ASSOCIATION

Merehead City, N. C., Monday, June 16, 1913.

Dr. L. N. Glenn, President, Gastonia.
Dr. G. M. Cooper, Vice-President, Clinton.
Dr. W. S. Rankin, Secretary-Treasurer, Raleigh.

EXECUTIVE COMMITTEE.

Dr. L. N. Glenn, Gastonia.
Dr. L. B. McBrayer, Asheville.
Dr. J. R. McCracken, Waynesville.

LEGISLATIVE COMMITTEE.

Dr. W. A. McPhaul, Lumberton.
Dr. D. E. Sevier, Asheville.
Dr. H D. Stewart, Monroe.

PUBLICITY COMMITTEE.

Dr. W. S. Rankin, Raleigh.
Dr. Sam Ellington, Wentworth.
Dr. A B. Croom, Maxton.

The titles of papers and their authors will be announced at an early date. Unusual interest has been shown this year in the preparation of a program by the chairmen of sections, and the prospects are fine for a most interesting set of papers.

Are the doctors of your county organized? If not, are you not partly responsible? Why not take the initiative?

HOUSE OF DELEGATES.

First Meeting, Tuesday, June 17, 2 p. m., Assembly Room, Second Floor of Hotel.

OFFICERS.

Dr. J. P. Munroe, President, Charlotte.
Dr. John A. Ferrell, Secretary, Raleigh.

The legislative and business body of the Society is composed of the officers of the Society and the delegates. The officers are the president, the three vice presidents, the secretary, the treasurer, and the ten councilors. Each county society which has paid its dues is entitled to one delegate. The large county societies are entitled to one

delegate for every twenty-five members in good standing or major fraction thereof, That is, thirty-eight paid members entitles a society to two delegates, and sixty-three members to three delegates. An alternate for each delegate should be elected to serve in the event the delegated elected is absent. *No delegate can be seated who has not remitted his dues through the secretary of his county society.* The term of office for delegates is two years. No delegate is eligible to the office of president, vice president, secretary or treasurer.

SEC. 14. The House of Delegates shall present a summary of its proceedings to the last general meeting of each annual session, and shall publish the same in the Transactions.

ORDER OF BUSINESS.

1. Call to order by the president.
2. Roll call and seating of qualified delegates.
3. Reading of minutes of previous meeting.
4. Reports of officers:
   (*a*) Secretary.
   (*b*) Treasurer.
   (*c*) Chairman Board of Councilors.
5. Report of Standing Committees:
   (*a*) Arrangements.
   (*b*) Public Policy and Legislation.
   (*c*) Publication.
   (*d*) Scientific Work.
   (*e*) Finance.
   (*f*) Obituaries and Memorial Exercises.
   (*g*) Medical Defense.
   (*h*) Collection and Preservation of Records.
6. Report of Special Committees:
   Constitution and By-Laws, Dr. A. A. Kent, Chairman.
7. Reading of Communications.
8. Reading of Memorials and Resolutions.
9. Unfinished Business.
10. New Business.
11. Election of Nominating Committee. (One from each Councilor District. The committee to nominate the officers and councilors must be named first day.)

COUNTY DELEGATES TO 1913 STATE MEETING.

First Regular Meeting Tuesday, 2 p. m.
Second Regular Meeting Thursday, 9 a. m.

Alamance:
Alexander (see Iredell).
Alleghany:
Anson:
Ashe:
Avery:
Beaufort:
Bertie:
  Dr. C. J. Sawyer, Windsor.
  Alternate, Dr. W. Mitchell, Lewiston.
Bladen:
Brunswick:
Buncombe:
  Dr. C. V. Reynolds, Asheville.
  Dr. E. R. Norris, Asheville.
  Dr. L. B. McBrayer, Asheville.
Burke:
  Dr. John McCampbell, Morganton.
  Alternate, Dr. I. M. Taylor, Morganton.
Cabarrus:
  Dr. Robert S. Young, Concord.
  Alternate, Dr. G. D. Moose, Mt. Pleasant.
Caldwell:
  Dr. A. A. Kent, Lenoir.
Camden (see Pasquotank).
Carteret:
  Dr. K. P. B. Bonner, Morehead City.
  Alternate, B. F. Royal, Morehead City.
Caswell:
Catawba:
Cherokee:
  Dr. F. L. Herbert, Andrews.
  Alternate, Dr. J. N. Hill, Murphy.
Chatham.
Clay (see Macon).
Cleveland.
Columbus.
  Dr. J. M. Floyd, Tabor.
  Alternate, Dr. W. F. Smith, Chadbourn.
Craven.
Cumberland-Hoke.
  Dr. Wm. S. Jordan, Fayetteville.
  Alternate, Dr. T. C. Bullock, Autryville.
Currituck.
Dare (see Pasquotank).
Davidson.
  Dr. D. J. Hill, Lexington.
  Alternate, Dr. J. R. Terry, Lexington.
Davie.
Duplin.
Durham.
  Dr. C. A. Woodard, Durham.
  Alternate, Dr. L. S. Booker, Durham.
Edgecombe.
  Dr. J. M. Baker, Tarboro.
  Alternate, Dr. W. W. Green, Tarboro.
Forsyth.
  Dr. H. T. Bahnson, Winston.
  Alternate, Dr. S. D. Craig, Winston.
Franklin.
Gaston.
  Dr. J. A. Anderson, McAdensville.
  Alternate, Dr. R. H. Garren, Bessemer City.
Gates.
Graham.
Granville.
  Dr. S. D. Booth, Oxford.
  Alternate, Dr. G. T. Sikes, Grissom.
Greene.

Dr. G. C. Edwards, Hookerton.
Alternate, Dr. W. B. Murphy, Snow Hill.
Guilford.
Dr. J. W. Long, Greensboro.
Dr. D. A. Stanton, High Point.
Halifax.
Harnett.
Dr. J. W. Halford, Lillington
Alternate, Dr. L. J. Arnold, Lillington.
Richmond.
Robeson.
Dr. A. B. Croom, Maxton.
Alternate, M. R. Gibson, Maxton.
Rockingham.
Dr. John W. McGeheé, Reidsville.
Alternate, Dr. F. G. Taylor, Leaksville.
Roœan.
Dr. J. E. Stokes, Salisbury.
Alternate, Dr. C. M. Van Poole, Salisbury.
Rutherford.
Dr. M. H. Biggs, Rutherfordton.
Alternate, Dr. J. M. Allhands, Cliffside.
Sampson.
Scotland.
Dr. Peter John, Laurinburg.
Alternate, Dr. W. D. James, Laurinburg.
Stanly.
Stokes.
Surry.
Dr. R. E. L. Flippin, Pilot Mountain.
Alternate, Dr. J. W. King, Elkin.
Twain.
Transylvania.
Dr. Goode Cheatham, Brevard.
Alternate, Dr. C. E. Lyday, Brevard.
Tyrrell (see Washington).
Union.
Dr. H. D. Stewart, Monroe.
Alternate, Dr. R. Armfield, Marshville.
Vance.
Wake.
Dr. R. H. Lewis, Raleigh.
Dr. J. D. Whitaker, Raleigh.
Dr. C. O. Abernethy, Raleigh.
Warren.
Washington-Tyrrell.
Dr. B. F. Halsey, Roper.
Dr. C. A. Flowers, Columbia.
Watauga.
Wayne.
Dr. J. R. Parker, Goldsboro.
Wilkes.
Wilson.
Dr. W. H. Anderson, Wilson.
Alternate, Dr. B. S. Herring, Wilson.
Yadkin.
Yancey.

WORK OF COMMITTEE ON NOMINATIONS.

1. President.
2. First Vice-President.
2½. Second Vice President.
3. Third Vice-President.
4. Ten Councilors (one for each district).
5. Orator.
6. Essayist.
7. Leader in Debate.
8. Committee on Scientific Work (3), (2 besides State Secretary).
9. Committee on Public Policy and Legislation (3 members and the President and Secretary).
10. Publication (3), (2 besides State Secretary).
11. Obituaries (3).
12. Finance (3).
13. Chairman of Committee on Arrangements.
14. Delegate to A. M. A. (1).
Virginia Medical Society (2).
South Carolina Medical Society.
15. Fix Time and Place of Meeting.

PROGRAM.

First Day, Tuesday, May 17.
10:30 a. m., Ballroom.

1. Call to order—Dr. J. P. Munroe, President.
2. Invocation—Rev. Euclid McWhorter.
3. Address of welcome in behalf of City—Mayor W. M. Webb.
4. Address of welcome in behalf of Carteret County Medical Society—Dr. David S. George.
5. Response in behalf of Society.
6. President's Annual Address—Dr. J. P. Monroe.
7. Report of Committee on Arrangements.
8. Report of Special Committees.
9. Announcements:
House of Delegates, 2 p. m.
Board of Councilors.

ENTERTAINMENT.

Sail on U. S. Revenue Cutter *Seminole* to Cape Lookout, Wednesday afternoon at 2 o'clock.

WEDNESDAY, JUNE 18TH, 12 O'CLOCK.

Conjoint Session of Medical Society of State of North Carolina and the North Carolina State Board of Health.

MEMBERS STATE BOARD OF HEALTH:

J. Howell Way, M.D., President, Waynesville.
Richard H. Lewis, M.D., Raleigh.
Edward C. Register, M.D., Charlotte.
J. E. Ashcraft, M.D., Monroe.
David T. Tayloe, M.D., Washington.
J. L. Ludlow, C.E., Winston Salem.
W. O. Spencer, M.D., Winston Salem.
Thomas E. Anderson, M.D., Statesville.
Charles O'H. Laughinghouse, M.D., Greenville.

OFFICERS OF COUNTY MEDICAL SOCIETIES

For 1913.

Alamance.
President .....
Secretary .....

Alexander (see Iredell).

Alleghany.
President .....
Secretary .....

Anson.
President .....
Secretary .....

Ashe.
President .....
Secretary .....

Avery.
President .....
Secretary .....

Beaufort.
President, S. T. Nicholson, Washington.
Secretary, W. T. Potter, Aurora.

Bertie.
President, P. C. Jenkins, Roxobel.
Secretary, J. L. Pritchard, Windsor.

Bladen.
President .....
Secretary .....

Brunswick.
President .....
Secretary .....

Buncombe.
President, A. W. Calloway, Asheville.
Secretary, G. S. Tennent, Asheville.

Burke.
President, Dr. J. B. Riddle, Morganton.
Secretary, Dr. J. W. Vernon, Morganton.

Cabarrus.
President, Robert S. Young, Concord.
Secretary, R. M. King, Concord.

Caldwell.
President, Dr. A. B. Goodman, Lenoir.
Secretary, Dr. C. B. McNairy, Lenoir.

Camden (see Pasquotank).

Carteret.
President, Dr. C. L. Duncan, Beaufort.
Secretary, Dr. W. E. Headen, Morehead City.

Caswell.
President .....
Secretary .....

Catawba.
President .....
Secretary .....

Chatham.
President .....
Secretary .....

Cherokee.
President, N. B. Adams, Murphy.
Secretary, W. C. Morrow, Andrews.

Chowan-Perquimans.
President, J. H. McMullan, Edenton.
Secretary, H. M. S. Cason, Edenton.

Clay (see Macon).

Cleveland.
President, T. G. Hanrich, Shelby.
Secretary, W. F. Mitchell, Shelby.

Columbus.
President, J. M. Northington, Boardman.
Secretary, H. B. Maxwell, Whiteville.

Craven.
President .....
Secretary .....

Cumberland-Hoke.
President, James M. Lilly, Fayetteville.
Secretary, R. L. Pittman, Fayetteville.

Currituck.
President .....
Secretary .....

Dare (see Pasquotank).

Davidson.
President, D. J. Hill, Lexington.
Secretary, J. R. Terry, Lexington.

Davie.
President .....
Secretary .....

Duplin.
President .....
Secretary .....

Durham.
President, W. N. Hicks, Durham.
Secretary, Foy Roberson, Durham.

Edgecombe.
President, J. J. Phillips, Tarboro.
Secretarp, S. N. Harrell, Tarboro.

Forsyth.
President, C. S. Lawrence, W.-Salem.
Secretary, J. C. Wiggins, W.-Salem.

Franklin.
President, R. F. Yarborough, Louisburg.
Secretary, H. A. Newell, Louisburg.

Gaston.
President, R. E. Rhyne, Mount Holly.
Secretary, T. C. Quickel, Gastonia.

Gates.
President .....
Secretary .....

Graham.
President, M. F. Maxwell, Robbinsville.
Secretary, George F. Brock, Brock.

Granville.
President, T. L. Booth, Oxford.
Secretary, G. T. Sikes, Grissom.

Greene.
President, W. W. Whittington, Snow Hill.
Secretary, J. M. Harper, Hookerton.

Guilford.
President, W. J. McAnnally, High Point.
Secretary, Parran Jarboe, Greensboro.

Halifax.
President .....
Secretary .....

Harnett.
President, H. H. Utley, Benson.
Secretary, J. W. Halford, Lillington.

Haywood.
President .....

Secretary .....
Henderson-Polk.
President, J. F. Cranford, Hendersonville.
Secretary, Guy E. Dixon, Hendersonville.
Hertford.
President, Thomas I. Burbage, Como.
Secretary, C. F. Griffin, Winton.
Hyde.
President .....
Secretary .....
Iredell Alexander.
President, M. R. Adams, Statesville.
Secretary, J. E. McLaughlin, Statesville.
Jackson.
President .....
Secretary .....
Johnston.
President, Oscar Eason, President.
Secretary, L. D. Wharton, Smithfield.
Jones (no society).
Lee.
President, Lynn McIver, Sanford.
Secretary, E. M. McIver, Jonesboro.
Lenoir.
President, Dr. R. W. Worten, Kinston.
Secretary, Albert Parrott, Kinston.
Lincoln.
President, John W. Saine, Lincolnton.
Secretary, John B. Wright, Lincolnton.
Macon-Clay.
President .....
Secretary .....
Madison.
President .....
Secretary .....
Martin.
President, J. S. Rhodes, Williamston.
Secretary, W. E. Warren, Williamston.
McDowell
President .....
Secretary, J. F. Jonas, Marion.
Mecklenburg.
President, W. O. Nisbett, Charlotte.
Secretary, Otho B. Ross, Charlotte.
Mitchell.
President .....
Secretary .....
Montgomery.
President, A. F. Thompson, Troy.
Secretary, C. Daligny, Troy.
Moore.
President, H. B. Shields, Carthage.
Secretary, M. L. Matthews, Vass.
Nash.
President .....
Secretary .....
New Hanover.
President, J. G. Murphy, Wilmington.
Secretary, E. S. Bullock, Wilmington.
Northampton.
President, J. L. Lister, Jackson.
Secretary, P. C. Brittle, Conway.
Onslow.
President, H. O. Hyatt, Kinston.
Secretary, L. D. Bryan, Snead's Ferry.
Orange.
President .....
Secretary .....
Pamlico.
President, G. S. Attmore, Stonewall.
Secretary, O. C. Daniels, Oriental.
Pasquotank-Camden-Dare.
President, Isaiah Fearing, Elizabeth City.
Secretary, S. Z. Fearing, Elizabeth City.
Pender.
President, R. H. Bradford, Burgaw.
Secretary, J. T. Hoggard, Atkinson.
Perquimans (see Chowan).
Person.
President, R. S. Baynes, Roxboro, R. F. D. No. 6.
Secretary, A. F. Nichols, Roxboro.
Pitt.
President, Jos. E. Nobles, Greenville.
Secretary, L. C. Skinner, Greenville.
Polk (see Henderson).
Randolph.
President .....
Secretary .....
Richmond.
President .....
Secretary .....
Robeson,
President, N. A. Thompson, Lumberton.
Secretary, B. W. Page, Lumberton.
Rockingham.
President, S. B. Ellington, Wentworth.
Secretary, John B. Ray, Leaksville.
Rowan.
President, John Whitehead, Salisbury.
Secretary, E. W. Currie, Salisbury.
Rutherford.
President, J. C. Twitty, Rutherfordton.
Secretary, W. C Bostic, Forest City.
Sampson.
President, J. O. Matthews, Clinton, R. F. D.
Secretary, F. H. Holmes, Clinton.
Scotland.
President, W. G. Shaw, Wagram.
Secretary, Peter McLean, Laurinburg.
Stanly.
President, D. P. Whitley, Albemarle, R. 4.
Secretary, J. Clegg Hall, Albemarle.
Stokes.
President .....
Secretary .....
Surry.
President, J. M. Flippin, Mt. Airy.
Secretary, E. M. Hollingsworth, Mt. Airy.
Swain.
President, R. L. Davis, Bryson City
Secretary, A. M. Bennett, Bryson City.
Transylvania.
President, C. W. Hunt, Brevard.
Secretary, E. S. English, Brevard.
Tyrrell (see Washington).
Union.
A. D. N. Whitley, Unionville.

H. D. Stewart, Monroe.

Vance.
President .....
Secretary .....

Wake.
President, H. A. Royster, Raleigh.
Secretary, W. C. Horton, Raleigh.

Warren.
President, P. J. Macon, Warrenton.
Secretary, C. H. Peete, Warrenton.

Washington Tyrrell.
President, W. H. Hardison, Creswell.
Secretary, W. H. Ward, Plymouth.

Watauga.
President, J. W. Jones, Boone.
Secretary, H. McD. Little, Boone.

Wayne.
President, T. L. Ginn, Goldsboro.
Secretary, W. H. Smith, Goldsboro.

Wilkes.
President, F. H. Gilreath, N. Wilkesboro.
Secretary, C. S. Sink, N. Wilkesboro.

Wilson.
President, M. M. Saliba, Wilson.
Secretary, K. C. Moore, Wilson.

Yadkin.
President, T. R. Harding, Yadkinville.
Secretary, S. A. Harding, Yadkinville.

Yancey (no society).

The Program.

Morehead City, Tuesday, Wednesday, Thursday, June 17, 18, 19, 1913
10:00 a. m.

North Carolina Public Health Officers' Association, Third Annual Session, Monday, June 16, 1913, 9:30 a. m. Morehead City.

NORTH CAROLINA HEALTH OFFICERS' ASSOCIATION, THIRD ANNUAL MEETING,

Merehead City, Monday, June 16, 1913.

Dr. L. N. Glenn, President, Gastonia.
Dr. G. M. Cooper, Vice-President, Clinton.
Dr. W. S. Rankin, Secretary-Treasurer, Raleigh.

EXECUTIVE COMMITTEE.

Dr. L. N. Glenn, Gastonia.
Dr. L. B. McBrayer, Asheville.
Dr. J. R. McCracken, Waynesville.

LEGISLATIVE COMMITTEE.

Dr. W. A. McPhaul, Lumberton.
Dr. D. E. Sevier, Asheville.
Dr. H. D. Stewart, Monroe.

PUBLICITY COMMITTEE.

Dr. W. S. Rankin, Raleigh.
Dr. Sam Ellington, Wentworth.
Dr. A. B. Croom, Maxton.

PROGRAM.

MORNING SESSION, 11 A. M.

1. President's Address—Dr. L. N. Glenn, Gastonia, N. C.
2. Secretary-Treasurer's Report—Dr. W. S. Rankin, Raleigh, N. C.
3. Important Changes Made in the Public Health Laws by the General Assembly of 1913—Dr. L. B. Evans, Clarkton, N. C.
4. The Part of the Physician in the Execution of the Vital Statistics Law—Dr. W. M. Jones, Greensboro, N. C.
5. Of What Value are Reported Cases of Tuberculosis and Typhoid Fever to the Municipal and County Health Officer—Dr. B. W. Page, Lumberton, N. C.
6. Medical Inspection of Schools—Dr. Albert S. Root, Raleigh, N. C.
7. Appointment of { Nominations / Committees on { Resolutions

AFTERNOON SESSION, 3 P. M.

8. Quarantine, Complete and Partial, and Placarding: To What Diseases Shall these Measures be Applied?—Discussion opened by Dr. W. S. Rankin, State Health Officer, Raleigh, N. C. Continued by Dr. C. S. Maxwell, Beaufort, N. C.; Dr. Joseph Rhem, New Bern, N. C.; Dr. Albert D. Parrott, Kinston, N. C.; Dr. John Blount, Washington, N. C., and Dr. Charles T. Nesbitt, Wilmington, N. C.
9. After What Diseases, with What, and How Should we Disinfect?—Discussion opened by Mr. Warren H. Booker, assistant to the Secretary of the State Board of Health, Raleigh, N. C. Continued by Dr. C. A. Shore, Raleigh, N. C.; Dr. H. B. Maxwell, Whiteville, N. C.; Dr. William S. Jordan, Fayetteville, N. C.; Dr. J. W. Halford, Lillington, N. C., and Dr. L. B. McBrayer, Asheville, N. C.
10. How to Handle the Contagions in School Populations—Dr. George M. Cooper, Clinton, N. C.
11. Report of Committees and Election of Officers for Ensuing Year.

EVENING SESSION, 8 P. M.

12. Address by His Excellency Locke Craig, Governor of North Carolina.
13. The Indications for Combining Municipal and County Health Work—Dr. J. T. J. Battle, Greensboro, N. C
14. Fundamental Duties of the Whole Time County and Municipal Health Officers—Dr. Charles O'H. Laughinghouse, Greenville, N. C.

ADJOURNMENT.

THE MEDICAL SOCIETY.

OFFICERS 1912-1913.

Dr. J. P. Munroe, President, Charlotte.
Dr. F. R. Harris, First Vice-President, Henderson.
Dr. E. S Bullock, Second Vice-President, Wilmington.
Dr. L. B. Morse, Third Vice-President, Hendersonville.
Dr. John A. Ferrell, Secretary, Raleigh.
Dr. H. D. Walker, Treasurer, Elizabeth City.
Dr. H. D. Stewart, Orator, Monroe.
Dr. J. T. Burrus, Essayist, High Point.
Dr. J. H. Harper, Leader in Debate, Snow Hill.

PROGRAM.

First Day, Tuesday, May 17.
10:30 a. m., Ballroom.

1. Call to order—Dr. J. P. Munroe, President.
2. Invocation—Rev. Euclid McWhorter.
3. Address of welcome in behalf of City —Mayor W. M. Webb.
4. Address of welcome in behalf of Carteret County Medical Society—Dr. David S. George.
5. Response in behalf of Society.
6. President's Annual Address—Dr. J. P. Monroe.
7. Report of Committee on Arrangements.
8. Report of Special Committees.
9. Announcements:
   House of Delegates, 2 p. m.
   Board of Councilors.

TUESDAY AFTERNOON, 3 O'CLOCK.

PHYSIOLOGY AND CHEMISTRY.

DR. I. H. MANNING, Chairman,
Chapel Hill.

1. Physiology and the Practice of Medicine —Dr. I. H. Manning, Chapel Hill.
2. "Why is a Laboratory and When"—Dr. A. S. Pendleton, Raleigh.
3. "Unannounced"—Dr. William T. Carstarphen, Wake Forest.
4. Blood Pressure as it Concerns the General Practitioner—Dr. Louis G. Beall, Greensboro.

SECTION EYE, EAR, NOSE AND THROAT.

DR. J. G. MURPHY, Chairman,
Wilmington.

1. Paralysis of the Extra Ocular Muscles— Dr. J. G. Murphy, Wilmington.
2. Neurosis—Dr Thomas W. Davis, Winston.
3. Removal of Tonsils—Dr. Joel Whitaker, Raleigh.
4. "Eye Work as It Is Done for the Man in General Practice"—Dr. John Hill Tucker, Charlotte.
5. Nasal Surgery with New Instrument —Dr. W. Perry Reaves, Greensboro.

TUESDAY NIGHT, 8:30 O'CLOCK.

1. Address—Governor Locke Craig.
2. The Diagnosis and Treatment of Hypothyroidism—Dr. Stuart McGuire, Richmond, Va.
3. The Conservation of Nerve and Mental Health—Dr. J. Allison Hodges, Richmond, Va.
4. A Demonstration of the X-Ray Diagnosis of Phthisis or Central Tuberculosis—Dr. W. D. Witherbee, Charlotte.
5. Ophthalmia Monotorum—Mr. John E. Ray, Superintendent State Blind School, Raleigh.
6. Feeblemindedness — (Illustrated) — Dr. Ira M. Hardy, Superintendent State School for the Feebleminded, Kinston.

Second Day, Wednesday Morning,
9 o'clock.

PRACTICE OF MEDICINE,

DR. J. F. PATTERSON, Chairman.
New Bern.

1. "Cerebral Malaria"—Dr. J. F. Patterson, New Bern.
2. "Hemorrhagic Fever"—Dr. Cyrus Thompson, Jacksonville.
3. "Hemorrhagic Fever"—Dr. F. L. Brown, Scott's Hill.
4. "Hemorrhagic Fever"—Dr. C. E. Kornegay, Kinston.
6. "Prophylactic Vaccination Against the Diarrhœal Diseases of Infancy"—A Preliminary Report Based on Animal Experimentation—Dr. E J. Wood, Wilmington.
6. Diseases Due to Faulty Nutrition with Especial Reference to Ileocolitis—Dr. Guy Smyth Kirby, Marion.
7. Water Compared with Other Agencies in the Spread of Typhoid Fever—Dr. C. A. Shore, Raleigh.
8. Effect of Different Anesthetics on the Pathology of the Kidney and on the Output of Urine in Experimental Nephritis—Dr. William deB. MacNider, Chapel Hill.
9. Functional Tests for Nephritis — Dr. Hubert Haywood, Raleigh.
10. Fallacies Concerning Insanity — Dr. Paul Anderson, Richmond.
11. Unannounced—Dr. A. D. Parrott, Kinston.
12. Pellagra—Dr. K. G. Averitt, Cedar Creek.
13. Diagnosis and Treatment of Pellagra— Dr. E. H. Bowling, Durham.

14. Alcoholism—Dr. C. W. Asheworth, Greensboro.

CONJOINT SESSION.

WEDNESDAY, JUNE 18TH, 12 O'CLOCK.

Conjoint Session of Medical Society of State of North Carolina and the North Carolina State Board of Health.

MEMBERS STATE BOARD OF HEALTH:

J. Howell Way, M.D., President, Waynesville.
Richard H. Lewis, M.D., Raleigh.
Edward C. Register, M.D., Charlotte.
J. E. Ashcraft, M.D., Monroe.
David T. Tayloe, M.D., Washington.
J. L. Ludlow, C.E., Winston-Salem.
W. O. Spencer, M.D., Winston-Salem.
Thomas E. Anderson, M.D., Statesville.
Charles O'H. Laughinghouse, M.D., Greenville.

ORDER OF BUSINESS.

1. Reports of Work Accomplished and Recommendations:
   (*a*) W. S. Rankin, M.D., Secretary Treasurer to Board.
   (*b*) John A. Ferrell, M.D., Assistant Secretary to Board for Hookworm Disease.
   (*c*) C. A. Shore, M.D., Director State Laboratory Hygiene.
2. Discussions.
3. Election of officers.
4. New Business.
   Adjournment.

NOTE—"The elective members of the State Board of Health and of the State Board of Medical Examiners for Nurses shall be elected by the members of the Society in general meeting on the second day (Wednesday) of the session." The term of office for Board of Health members is six years.

At Morehead City, June 18th, elections for two members of the State Board of Health will be held. These offices are now held by Dr. J. E. Ashcraft, of Monroe, and Dr. David T. Tayloe, of Washington.

WEDNESDAY AFTERNOON, 3 O'CLOCK.

MISCELLANEOUS PAPERS.

1. "The Prevention of the Complications of Gonorrhea"—Dr. C. O. Abernethy, Raleigh.
2. "The Advantages of the Perineal Over the Suprapubic Prostatectomy"—Dr. A. J. Crowell, Charlotte.
3. "The Ideal Treatment of Syphilis"—Dr. F. D. Austin, Charlotte.
4. Physiologic Psychology in Relation to Feeblemindedness—Dr. H. O. Hyatt, Kinston.
6. What State Medicine Stands For—Dr. Paul H. Ringer, Asheville.

OBSTETRICS AND GYNECOLOGY.

DR. A. B. CROOM, Chairman, Maxton.

1. Pelvic Troubles in the Female—Dr. A. B. Croom, Maxton.
2. Reflex Vomiting in Uterine Displacements—Dr. T. Marshall West, Fayetteville.
3. Radical and Conservative Management of Some Obstetric Problems in General Practice—Dr. Roscoe D. McMillan, Red Springs.
4. The Midwife—Dr. J. W. Halford, Lillington.
5. Report of Cæsarean Section—Dr. K. G. Averitt, Cedar Creek; Dr. J. R. Parker, Goldsboro.
6. Unannounced—Dr. H. D. Stewart, Monroe.

WEDNESDAY NIGHT, 8:30 O'CLOCK.

REPORT OF THE COMMITTEE ON OBITUARIES.

Dr. E. G. Moore, Chairman, Elm City.
Dr. A. W. Knox, Raleigh.
Dr. M. L. Stevens, Asheville.
Essay—"Our Profession"—Dr. J. T. Burrus, High Point.
Oration—"Mr. Crook"—Dr. H. D. Stewart, Monroe.

THURSDAY MORNING, 9 O'CLOCK.

MATERIA MEDICA AND THERAPEUTICS.

DR. M. A. ROYAL, Chairman, Elkin.

1. Thyroidectin and Its Employment in the Treatment of Exophthalmic Goitre—Dr. J. J. Phillips, Tarboro.
2. The Value of Sphygmonometer to the Therapeutist—Dr. T. L. Ginn, Goldsboro.

ANATOMY AND SURGERY.

Symposium on Surgery of the Alimentary Tract.

DR. HENRY NORRIS, Chairman, Rutherfordton.

1. Unannounced—Dr. Henry Norris, Rutherfordton.
2. Foreign Bodies id the Trachea and Œsophagus with Report of Case—Dr. L. A. Crowell, Lincolnton.
3. Diagnosis and Treatment of Chronic Gastric Ulcer—Dr. W. O. Nesbitt, Charlotte.
4. Diseases of the Gall Bladder and Their Surgical Treatment—Dr. J. F. Highsmith, Fayetteville.
5. Acute Obstructions of the Bowels from

a Very Large Gall Stone—Dr. R. L. Gibbon, Charlotte.

6. Resection of the Intestine—Dr. Joseph Graham, Durham.
7. Sigmoid Adhesion—Dr. H. A. Royster, Raleigh.
8. Surgery the Last Resort. The Surgeon's Responsibility in Such Cases—Dr. D. T. Tayloe, Washington.
9. Management of Abdominal Adhesions Dr. J. T. Burrus, High Point.
10. Surgical Pathology of the Lower Right Abdominal Quadrant—Dr. A. G. Brenizer, Charlotte.
11. Urethro-Rectal Fistulæ—Dr. A. J. Crowell, Charlotte; Dr. J. W. Squires, Charlotte.
12. Congenital Pyloric Stenosis with Report of Case—Dr. Lyle S. Booker, Durham.
13. Pellagra, Surgery, and the Colloids (one new factor and a theory as to its cause)—Dr. Harlan Shoemaker, Shelby.
14. Osteomyelitis—Dr. Eugene B. Glenn, Asheville.

The regular monthly meeting of the Clarendon County Medical Association was held with an unusually good attendance of the members. The principal topic considered at the meeting was gastro-intestinal disorders, which elicited expressions from a majority of those present. After the adjournment of the regular session tthe members repaired to a cafe and spent a pleasant hour in the consideration of a fish fry luncheon that had been prepared under the thoughtful direction of Dr. W. S. Harvin, the secretary of the association.

Southern Railway Surgeons.

The eighteenth annual convention of the Association of Southern Railway Surgeons meeting at Old Point, Va., adjourned June 4th after the election of officers. The convention voted to meet in Washington in 1914.

Officers elected were:

President, Dr. R. J. Noble, Selma, N. C.; first vice-president, Dr. J. S. Weathers, New Albany, Ind.; second vice-president, Dr. W. P. Horton, North Wilkesboro, N. C.; third vice-president, Dr. G. B. Thornton, Memphis, Tenn.; fourth vice-president, Dr. E. P. McCullom, Greensboro, Ala.; secretary and treasurer, Dr. J. M. Ray, Woodstock, Ala.; member executive council, Dr. R. R. Shands, Washington.

Duke, N. C., is soon to have a modern hospital, the Erwin Cotton Mills Company providing the needed institution. A part of the furniture and fixtures has already been received and as soon as the remainder comes the hospital will be opened. Miss Elizabeth Pratt will be superintendent and Dr. W P. Holt will be the physician in charge.

BOOK NOTICES.

Mendel's Principles of Heredity. By W. Bateson, M.A., F.R.S., V.M.H., Honorary Fellow of St. John's College, Director of the John Innes Horticultural Institution. Cambridge: at the University Press, New York: G. P. Putnam's Sons. 1913.

The object of this book is to give a succinct account of discoveries in regard to heredity made by the application of Mendel's method of research. Following the clue which his long lost papers provided the writer has reached a point from which classes of phenomena hitherto proverbial for their seeming irregularity can be recognized as parts of a consistent whole. The study of heredity thus becomes an organized branch of physiological science, already abundant in results, and in promise unsurpassed.

A translation of Mendel's two papers, together with a biographical note, is appended. The translation of the first, based on a draft prepared in this book was printed in the Royal Horticultural Society's Journal, 1901. With modiffcations, the author, Mr. Druery, published it separately in 1902, giving a brief summary of Mendelism as then developed, under the title Mendel's Principles of Heredity: A Defence. The object of that publication was to put Mendel's work before the English speaking peoples and to repel the attack which the late Professor Weldon had recently made on Mendelian methods and the conclusions drawn from them. The edition was at once sold out, but the Doctor did not reprint the book. As a defence it had served its purpose. Moreover the progress of experiment with the extension of Mendelian conceptions was rapid, and the account of those conceptions there given was in some important respects soon out of date. In particular the writer's view of the nature of compound factors was shown to be unnecessarily complex and largely incorrect. Though obviously in a subject fast extending under the influence of many workers there can be no finality, yet at the present time our knowledge of the main facts has reached a definite stage, and a useful and relatively permanent presentation of the phenomena can be attempted.

The author says that the range and diversity of facts, zoological and botanical,

from which the material is drawn are so wide that it has been difficult to present them adequately within a moderate compass.

In the original plan of the book, says the author, it was intended to discuss somewhat fully the bearing of the new facts on the great problems of biology, but it was perhaps more fitting that these theoretical considerations should be detached from a presentation of the concrete phenomena. In 1907, the author had the honor of delivering the Silliman Lectures in Yale University, and he then took these wider aspects of Genetics as his theme, showing the bearing of the new knowledge on current theory, especially on that of evolution, and the nature of variation. The substance of these lectures I propose to publish separately with amplifications, and on the present occasion allusion to these matters has been restricted to the briefest possible indication of the lines of thought which Mendelism inevitably suggests.

A chapter dealing with practical applications of Mendelian principles has been introduced. Such applications will probably far exceed any limits we can yet perceive. Among them we must foresee not merely advances in the art of breeding animals and plants, but a control over the destiny of our own species.

NOTE TO THE THIRD IMPRESSION.

In the past three years the progress of Mendelian analysis has been very rapid, and certain chapters of this book, especially those dealing with Coupling and Repulsion, and with the Heredity of Sex, are in essential respects out of date. Knowledge of these subjects is at present in a transitional stage, and I have endeavored in a series of the principal advances made, while awaiting an opportunity of rewriting the book.

I am obliged to Professor Arnold Lang and to Mr. C. C. Hurst for calling my attention to errors, which with some others, have been corrected.

The book is a fine volume of 413 pages, well indexed and with a good many illustrations. We have looked over the book with a good deal of pleasure.

The price of this book is $3.50.

The Walled City: A Story of the Criminal Insane By Edward H. Williams, M.D., formerly Assistant Professor of Pathology and Bacteriology, State University of Iowa; formerly Assistant Physician at the Matteawan State Hospital for Insane Criminals; Assistant Physician at the Manhattan State Hospital for the Insane, etc. Cloth, 12mo, 250 pages, 8 full-page illustrations. $1.00 net; by mail $1.11. Funk & Wagnalls Company, Publishers, New York.

This book, unlike any other—for general reading—is written out of expert medical knowledge, but is not a scientific disquisition.

Dr. Williams presents, in a manner not attempted heretofore by a competent writer, a picture of the every-day life of those within the "Walled City"—any hospital for the sick-minded of criminal tendencies. The book deals with the social life of the insane, the amusements provided for them, the care taken to prevent their escape—these features of their lives being often curiously interesting. Few persons, aside from those directly concerned with the care of the insane, have more than the vaguest conception of what these unfortunates are like, or how they are cared for. Yet this subject is of vital importance to each of us, since the collective population of these institutions is greater than that of all the universities and colleges in the general population. The book will be a revelation to most intelligent readers.

The Narcotic Drug Diseases and Allied Ailments, Pathology, Pathogenesis, and Treatment. By Geo. E. Petty, M.D., Memphis, Tenn., Member Memphis and Shelby County Medical Society, Tennessee State Medical Association, American Medical Association, Tri State Medical Association of Mississippi, Arkansas and Tennessee; also Mississippi Valley Medical Association, Southern Medical Association, and of the American Society for the Study of Alcohol and Narcotic Diseases. Illustrated. Philadelphia: F. A. Davis Company, Publishers, 1913. Price, $5.00 net.

In this volume narcotic addiction (including alcoholism) is treated as a disease —a toxemia—of drug, auto- and intestinal origin, the management and treatment of which belong to the field of internal medicine and not to neurology.

Long-standing serious errors of far-reaching consequences are corrected, the true pathology and pathogenesis clearly and fully shown, and as a natural corollary the most efficient treatment is completely set forth in these pages.

It is fundamentally different from any other work published in this heretofore baffling and obscure department of human medicine.

The volume contains 516 pages and the illustrations are very good indeed. It is beautisully bound and printed on good paper. It gives the reviewer a good deal of pleasure to recommend this very valuable book.

Diseases of the Heart and Aorta. By Arthur Douglass Hirschfelder, M.D., Associate in Medicine, Johns Hopkins University, with an introductory note by Lewellys F. Barber, M.D., LL.D., Professor of Medicine, Johns Hopkins University. 344 illustrations by the author. Second Edition. Philadelphia & London: J. B. Lippincott Company.

Since the appearance of the first edition numerous advances have been made in the subject of cardiac disease of such importance that, in order to embody them in the text, several chapters have had to be rewritten and enlarged.

The electrocardiograph, which has now assumed a role of primary importance in physiology, pharmacology, and clinical observation, has been discussed in detail as to theory, construction, and application. The study of the mechanism of the normal and pathological heart-beat by this method has thrown so much light upon the site of origin of the normal and abnormal heart-beat, the action of the cardiac nerves, and the paroxysmal tachycardias and the permanent irregularity that it has become a procedure of routine examination of heart cases in many medical clinics, and in the hands of Mackenzie, Cushny and Lewis has led the way to more exact methods for the use of digitalis. Other drugs which have merited consideration have considerably enlarged. The studies of Haldane, Pembrey and Yandell Henderson upon acapnia, and of Sir William Ewart upon CO_2 inhalations, have given a clinical importance to the investigations of CO_2 in the alveolar air of the lungs. The recent investigations upon syphilitic arterial disease and its frequency have made possible a more clear-cut classification of arteriosclerotic conditions, and in the light of these the section upon the pathology of arteriosclerosis has been rewritten.

The volume contains 738 pages and it is very accurately indexed. The illustrations are very accurate and add a great deal to the value of the volume. The selling price of the volume is not known.

Golden Rules of Diagnosis and Treatment of Diseases. Aphorisms, Observations, and Precepts on the Methods of Examination and Diagnosis of Diseases, with Practical Rules for Proper Remedial Procedure. By Henry A. Cables, B.S., M.D., Professor of Medicine and Clinical Medicine of the College of Physicians and Surgeons; Consultant at Jefferson Hospital; formerly House Physician at Alexian Brothers' Hospital, St. Louis. Second Edition, revised and rewritten. St. Louis: C. V. Mosby Company, 1913.

It is a great satisfaction, as we interpret it, for the publisher to be called upon to issue a second edition in so short a time.

As was stated in the Preface to the first edition, this book is intended to furnish a quick means of ready reference for physicians who at the moment have not the time for more extensive reading.

We do not advocate the substitution of a necessary brief epitome for more extensive reading. The mission intended by the author was clearly stated by one reviewer who said the book should be on the desk where it may be referred to many times a day.

There has been new matter added and the whole carefully gone over and proper corrections made. Truth has been gleaned from every source.

The volume is well arranged, beautifully bound, and contains 318 pages. It is very accurately indexed.

Mind and Its Disorders. A Text-Book for Students and Practitioners. By W. H. B. Stoddard, M.D., F.R.C.P., Resident Physician and Medical Superintendent of Bethlehem Royal Hospital; Lecturer on Mental Diseases to the Westminster Hospital, the Royal Free Hospital and the London School of Clinical Medicine; Late Educational Secretary of the Medico-Psychological Association of Great Britain and Ireland. Second Edition, with Illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

It is gratifying to find that there has been so much skilled research in the field of psychiatry since the appearance of the first edition of this valuable work which has only been a little more than three years ago.

The study of the subconscious by psychoanalytic methods has become sufficiently important to justify the addition of two chapters, bearing on this subject, at the end of Part II.

Part III has been rearranged in such a way as to establish more clearly the similarity of the various toxic psychoses.

The reviewer has looked over this book with a good deal of interest and it is a very valuable volume. It has 518 pages and it gives us pleasure to recommend it to every one who is interested in this subject. The price of this book is $4.00.

Transactions of the Fifteenth Annual Meeting of the American Gastro-Enterological Association Atlantic City, June 3 and 4, 1912.

Officers: President, J Kaufmann, New York; First Vice-President, Wm. G. Morgan, Washington, D. C.; Secretary and Treasurer, Franklin W. White, Boston.

Councilors: J. Friedenwald, Baltimore; C. D. Aaron, Detroit; J. S. Myer, St. Louis. Committee on Admission and Ethics: A. A. Jones, Buffalo; A. L. Benedict, Buffalo; J. A. Lichty, Pittsburg.

This is a very creditable volume of possibly 200 pages with a great many interesting papers and discussions.

Abstracts of the Leading articles of the month.

The Use and Abuse of Atropine in Eye Work.—Harman (West London Medical Journal) says that the main usage of atropine has no competitor. In acute iritis the use of atropine is of first importance. No matter what the general cause of the iritis may be, and what general treatment may be considered necessary or even urgent, the eye wants atropine, and the use or effective use of the atropine must come before all else. We must, if possible, get the pupil open widely; that checks the iritis, prevents adhesion, and saves the vision for the future. But its must be effectual; to use it ineffectually is not to use it but to abuse it.

A very powerful mode of admmistering atropine is to place a small crystal of the sulphate directly on the conjunctiva and allow it to be dissolved by the tears. That method he does not like; the risks of toxic effects are too grave. The most powerful effect can be obtained by a combination of atropine and cocaine. Each will supplement the work of the other, as has been previously explained. A 2 per cent. solution of each in water, castor oil, or in an ointment of lanolin or vaselin gives perfect results

He prefers the oil and the ointment—the oil for his own use, the ointment for home use. The oil spreads immediately and acts quickly, and leaves the eye clean for examination. The ointment is best for home use. for the attendant can see what becomes of the piece of ointment; it is either placed between the lids or it is not. With the watery solution an unskilful attendant more often than not drops the solution on to the cheek. Again. there is less risk of toxie symptoms and skin irritation with the oily and ointment preparations, for less is used, and but little gets into the nose.

In a case of acute iritis such a preparation should bs used every two hours for the first twelve hours, and the atropine should be put in, for the first time at any rate, by the surgeon himself. If the pupil can be dilated it will dilate under such treatment, combined with leeching, fomenting, purging, or such general measures as the case may indicate. To use weak solutions of atropine, ¼ or ½ per cent., is utterly futile. It is not using atropine, it is abusing it, for it is a pretense at its use.

Again, to continue the use of an efficient atropine preparation day after day when the pupil will not dilate because of firm old synechiæ is to abuse the drug; for the ineffectual tugging of the muscles at the tough adhesions only irritates the eye.

Excluding these points, a mistaken use of atropine is most often due to a mistake in diagnosis. This is no place to enter into a differential diagnosis of conjunctivitis, iritis. and glaucoma. But the best guard against such an error is always to watch the pupil. In an acutely inflamed eye a small pupil may mean iritis, but if it promptly dilates large and round it is surely not iritis, but probably only conjunctivitis. If the pupil dilates, but with pointed irregularities, there is, or has been, iritis. If the pupil is large, more or less oval or sluggish, it is most probably glaucoma. We should examiue the pupil at each time a case is seen and look at it in a good light and through the best magnifying glass we possess. These things have to be looked for; they are not manifest to casual glances.

In chronic iritis atropine is less useful; sometimes it is injurious, In most of these cases the co existing cyclitis is the most serious condition, and whilst the atropine dilates or benefits the iris, it relaxes the ciliary muscles and allows of an added engorgement of the ciliary body. If there be evidence of severe cyclitis in the presence of vitreous opacities atropine had better be discarded and only a temporary mydriatic be used on occasions to insure that the iritis is not becomtng adherent.

With few exceptions atropine ointment is the most comforting of applications for all sorts of corneal ulcers or injuries. The fatty base is comforting; the drug quiets the reflex irritation set up from the cornea. There are some cases, however, in which a sudden change from atropine to eserine works miracles.

Chronic relapsing phlyctenular ulcers, old and sluggish ulcers with much vascular penetration, do not always do well with atropine, but they may clear up with surprising quickness when the stimulus of eserine is applied. It is nearly as effective as the operative destruction of the invading vessels by peritomy or the cautery

The use of atropine after wounds of the cornea, accidental or operative, is always a puzzle to the beginner. What shall he use, atropine or eserine? Which will best keep the iris from prolapse?

He says when in doubt in theee cases use

atropine, and his reason is this: when the anterior chamber is open the aqueous flows directly through the opening instead of by the usual outlet, and it escapes in spurts as the pressure of the aqueous is abte to force open the wound. However effectively eserine may contract the pupil it will not prevent the iris being rushed into the wound on such a sudden escape of aqueous—in fact, the collection of aqueous behind the contracted pupil helps to cause this prolapse. The iris is most secure when it is folded right back into the corneal angle. This applies both io injuries and to cataract extraction, where iridectomy is not due. From his experience of Liebreich's extraction without iridectomy, Harman is convinced that some of the risk of prolapse ascribed to this measure is due to the incorrect use of eserine. Use atropine, and this risk is sensibly reduced.

He refers to those few patients who are intolerant of atropine. In these the most careful usage may set up a smart, hot, dry "eczema" of the lids. When there is an acute iritis this state of affairs is most unfortunate. It may sometimes be avoided by thickly greasing the lids and skin with vaselin and dropping the smallest drop of a watery solution of atropine on the con junctiva and sopping up with wool any tear that shows itself. Even that may not succeed, and one must fall back upon hyoscine or duboisine; homatropine does not last sufficiently long for such a purpose.

Then there are children who have suffered from phlyctenular keratitis or chronic blepharitis. and in whom we wish to attempt a correction of the refraction. In these the use of atropine will often restart all the old inflammatory symptoms, so that here homatropine should be used in one application and the examination be made and concluded as soon as the eyes are ready.

The Varieties of Tuberculin in the Treatment of Tuberculosis.—Raw (British Medical Journal) has this to say about the treatment by tuberculin:

It is in the avirulent bacillary infections that tuberculin is of great service, and he has found it of little or no value in acute virulent iufections.

The whole object of treatment by tuberculin is to produce an immunity in the blood against infection by tubercle bacilli; and, what is even more important, to prevent the further spread of the bacillary iniection in the tissues. Whether or not it is possible to ever produce a complete lifelong immunity against tubercle is a matter of doubt.

As a result of his experience Raw has found that the lesions in the body which are caused by the typus humanus are benefited more quickly and certainly if a tuberculin prepared from the opposite strain—namely, bovine tuberculin—is used; and in all cases of pulmonary tuberculosis he now only uses bovine tuberculin. It is less toxic, and does not so readily cause reac tion, is more easily tolerated, and causes the bacilli to disappear from the sputum more quickly. For the lesions caused by the typus bovinus—namely, lymph glands, tuberculous peritonitis, lupus, tuberculin disease of the bladder, bones, and joints—he invariably uses Koch's old tuberculin prepared from human cultures.

The question of dosage is of vital importance, and his routine practice is to administer a coutse of tuberculin in twelve weekly injections, then resting for a month, and, if necessary, repeating the maximum injection every week. His dosage is as follows of either human or bovine tuberculin:

0.0001 mg.	0.0006 mg.	0.006 mg.
0.0002 mg.	0.0008 mg.	0.0075 mg.
0.0004 mg.	0.001 mg.	0.008 mg.
0.0005 mg.	0.004 mg.	0.01 mg.

A special watch must be kept on the temperature, pulse, and blood.

It is rare to observe a general reaction if the above dosage is carefully followed.

In a great many cases the tubercle bacilli disappear entirely from the sputum at the end of a course of injectton, but, unfortunately, if the tuberculin is not perrsisted in they in many instances speedily return—so that in some cases of pulmonary tuberculosis the injections should be continued for an indefinite time.

Whilst tuberculin per se cannot be expected to heal cavities in the lung or replace damaged tissues, yet it undoubtedly has the power of preventing the spread of the tubercle to healthy parts by means of its immunizing effects. Time is thus given for repair of the affected tissues.

In conclusion, Raw expresses the opinion, after treating over 600 patients with injections of tuberculin, that it is a remedy of the greatest value, especially in early cases and where the deposit of tubercle is localized, as in one apex or in a lymph gland or single joint; but where the tuberculosis is disseminated and complicated by secondary infection the use of tuberculin cannot be expected to be of much avail. It ought, however, to be tried in every case with the hope of some relief or possible benefit, as we cannot allow the patient to suffer and die without making every effort to arrest the progress of the disease.

Tuberculin is not going to revolutionize the treatment of tuberculosis. It is a valuablu aid to the other methods of treatment, hence it must be used with care and discrimination and with a full knowledge of

its dosage and therapeutic effects.

Raw concludes by saying that the best treatment we can offer today to a person infected with tuberculosis is a prolonged open-air life, preferably in a well-conducted sanatorium, excess of nutritious food, gentle exercise followed by plenty of rest, and a course of tuberculin by a careful physician.

Some Further Points in the Treatment of Epilepsy by Chloretone.—Bentley (Australasian Medical Gazette) says it will facilitate our conception of the therapeutic action of chloretone if we divide the symptoms which it produces into three stages. This subdivision is only an arbitrary one, and in practice the stages merge imperceptibly one into the other. Still the symptoms appear in the same order with such constancy that the subdivisions are warrantable. They are: (1) Dulness and drowsiness; (2) vertigo, with or without albuminuria; (3) stupor.

1. Dulness and Drowsiness.—In the treatment of epilepsy by chloretone, we must expect some slight degree of dulness and drowsiness, but if chloretone is continued in the doses which Bentley will presently mention, this usually soon passes off as the patient becomes more accustomed to the drug. Occasionally this does not happen, but instead cumulative action results, and the second stage is reached. It is unusual for this latter result to manifest itself with smaller doses than 10 grains daily, and he is speaking of female patients, who are not so bulky as men. This first stage may be accompanied by a complaint of neuralgic pains in the head or face. He does not place much reliance on this, as it is a subjective symptom, and as the patients are mentally afflicted their statements are not to be depended on.

2. Vertigo.—The second stage is that of vertigo. At first the patient complains of dizziness, with perhaps weakness of the legs, and if chloretone is continued in the same doses, he may actually fall down from giddiness. This symptom of vertigo is of the utmost importance in the continuous administration of chloretone for epilepsy, and Bentley has little doubt that it holds good, no matter for what purpose the drug is prescribed. It is the danger-signal which we may reach, but if we pass it the result will be somewhat alarming symptoms of stupor in a varying degree. When he gave the drug in larger doses he frequently found patients suffered from dizziness, but at that time he had not fully appreciated the significance and importance of this symptom. He has previously pointed out that the vertigo of epilepsy may be mistaken for vertigo produced by chloretone. If due to epilepsy it is sudden in onset and of transitory duration. If it is caused by chloretone it is most marked about two hours after taking a dose, and the effects last for several hours.

3. Stupor.—The third stage, namely, that of stupor, is illustrated by a case of tetanus published by Hobbs and Sheaf in the British Medical Journal last year. The tetanus was of a severe type, and within five days 420 grains of chloretone was given. On the sixth day the throat was filled with mucus, which improved on the exhibition of atropine hypodermically. On the evening of that day the patient passed into a semicomatose condition, from which he eventually made a good recovery. There is no mention of vertigo by these authors, but possibly the patient was too ill to express his feelings. Bentley has placed these symptoms before us, not with any idea of deterring us from using chloretone, quite the reverse, but that we may have a due appreciation of the symptoms to expect and be on the lookout for them should they appear.

A large number of our most useful drugs produce toxic symptoms. Have we not read of deaths from injections of mercury and salvarsan? And yet these are our sheet-anchors in the treatment of syphilis. Every one of us has at some time seen toxic effects from the administration of quinine and the salicylates, yet if we come across a case of malaria or rheumatic fever, there is not one of us who would think of withholding these appropriate remedies.

He says he need not swell this list, as it is only too well known to us all, but he adds chloretone, so that should unpleasant symptoms arise, we will not be taken unawares.

What dose of chloretone should we prescribe, and when should it be administered? Although routine is not good treatment, Bentley advises that we begin with a dose of either 3 grains or 5 grains daily, and continue this amount for a month, keeping a careful written account of the number of fits. If at the end of this time there is no improvement and no vertigo, the amount may be increased to 10 grains daily, which may be given in one or two doses. He does not recommend bigger doses than this unless the patient be under supervision, and in any case it is well to warn the patient or his relatives in regard to dizziness. It will be observed that chloretone was given in doses of 10 grains every second day; in two of the cases he showed the result was highly satisfactory. If the patient is in an institution we can begin with a daily dose of 10 grains, and if vertigo supervenes the quantity can be reduced. By this latter method the effect is more rapid than if we

give smaller doses from the first. If the patienr is in status epilepticus, or having serial attacks, we can give a single dose of from 30 to 60 grains, and the result is highly gratifying, as chloretone—if we except chloroform—is by far the most powerful anti-convulsant we possess. The time of onset of fits must be the guide to the time of administration of the dose, but if the fits are equally frequent during the day and night, he has a decided preference for giving the dose before bedtime. A point of practical importance is to prescribe it in capsules, as it is such a volatile substance that it rapidly disappears, especially in hot weather, if made up in ordinary powder papers. As it is put up in 3 grain and 5-grain cansules, this difficulty is easily overcome.

Treatment of Placenta Previa with Hypophyseal Extracts.—Trapl (Monatschr. f. Geburtsh u. Gynak.) reports an experience with sixteen cases of placenta previa treated with pituitrin, among which subsequent labors were favorable for the mother and in only one case did an atonic condition of the uterus develop. Thirteen living children were born, of which two died subsequently of inanition. Three children were born dead, two of which were found to have died before the pituitrin was employed. Out of the fourteen cases in which the children were alive, there were three cases of marginal, ten of lateral and one of central placenta previa. In one case where a fetal death resulted, this occurred four hours after the injection and it is doubtful therefore whether it was due to the same. The course of the labor was accelerated in the majority of the cases. His recommendations are as follows: If only a small portion of the placenta presents, and especially if a vertex is present and the labor has advanced to such an extent that the cervix is shortened and sufficiently open, then the membranes are ruptured and pituitrin given. This method is best adopted for those cases in which a marginal variety of placenta previa is present, because if a larger segment presents the engagement of the head is interferred with. In other cases the author recommends combined version with injections of pituitrin. The resulting labor pains force the breech against the loosened segment of the placenta, and the completion of the delivery may be safely awaited, no attempts at extraction being necessary except that directed to the arms and the head. In cases where dilatation is not sufficient to admit combined version, a small dilating bag may be inserted, or a vaginal tampon applied, after this becomes sufficiently dilated, then a combined version with injection of pituitin follows.

Vaccination with Living Microorganisms. Broughton Alcock, in The London Lancet, mentions the favorable results that he obtained with the use of sensitized living vaccines. The Doctor conducted his research as an assistant to Professor Besredka in Metchnikoff's laboratory at the Pasteur Institute. The success attending the use of sensitized living typhoid vaccines has already been published. The author's recent efforts have been directed against infections by various strains of staphylococci and streptococci; and against those due to the gonococcus. The sensitization of the bacteria is effected by the use of an antiserum. For streptococci the antistreptococcus serum as prepared at the Pasteur Institute is used. The antigonococcal and antistaphylococcal sera are prepared in the goat. For the gonococci the author leaves them with the antiserum 12-24 hours at 37° C. and 12-24 hours in his room. For the staphylococci and streptococci he leaves them with their respective antiserum for one hour at 37° C. and all night at 0° C. The quantity of serum depends on its richness in sensitizing substances. In cases of gonorrheal orchitis and epididymitis most of the patients were free from pain after the first injection. In four cases of gonorrheal rheumatism the results were remarkable. After the first injection and within forty-eight hours acutely inflamed joints that one could barely touch, in one case of fifteen days' duration, were freely movable without pain. The exudation disappeared in three days. Vertebral pain and painful nonsuppurating ganglions were also rapidly relieved by the first injection. The cure persisted when patients were seen one month later. The only instances in which there was not complete relief within a week were those of subacute tendinitis without exudation. They necessitated at least one to three weeks' injection treatment. The author found, however, no advantage of the living sensitized gonococci over the dead organisms. In sixty cases of staphylococcus infection treated with sensitized living staphylococci, there was no instance of failure to markedly ameliorate the condition.

A New Test for Diacetic Acid.—Hurtley (The London Lancet) describes this new test as follows: To 10 c.c. of the urine add 2.5 c.c. of concentrated hydrochloric acid and 1 c.c of a 1 per cent. solution of sodium nitrite; shake and allow to stand two minutes. Now add 15 c.c. of strong ammonia, followed by 5 c c. of a 10 per cent. solution of ferrous sulphate, or a solution of ferrous chloride of equivalent strength (2 grm. of iron in 100 c.c.). Shake up, pour into a 50 c.c. Nessler glass, and allow to stand undisturbed. It is not advisable to filter.

A beautiful violet or purple color is produced. The reaction is a slow one, and the speed at which the color develops depends on the concentration of the acetoacetic acid in the urine; the color deepens for several hours after its first appearance. The explanation which the author offers of the test is that the acetoacetic acid is converted by the nitrous acid into isonitrosoacetone, which forms a salt with the ammonia; the ferrous salt then produces a purple colored salt from the ammonia salt by double decomposition. That isonitrosoacetone in alkaline solution forms colored salts on the addition of ferrous sulphate was first shown by Martha A. Whiteley. The test has been tried on several normal and on a large number of pathological urines, and on the urine of patients taking salicylic preparations; but only urines which react with the other tests for acetoacetic acid give this test. Acetone does not give the test, but an aqueous solution of ethyl acetoacetate gives a pure blue color—not a purple—and it only gives the blue color when much more nitrite is used than is prescribed in the test above. As regards delicacy, the test, when performed on a solution of sodium acetoacetate prepared in the way already described, shows at a dilution of 1 part of acetoacetic acid in 50,000 parts of solution.

History of Paresis.—Moenkmoeller (Zeitschrift f. die gesammte Neurologie und Psychiatrie) presents valuable documentary evidence in proof of his contention that the disease was in existence long before the medical profession had a knowledge of it, but in the Post-Columbian period. In the early days of its appearance, paresis was rare, but in the latter part of the eighteenth and the early part of the nineteenth centuries its occurrence became more frequent.

Contribution to the Study of the Neurological Complications of Asute Malaria.—Dumolard, Aubrey and Trolard (Revue Neurologique) report a number of cases with neurological symptoms. Of these five cases were of the cerebral form accompanied by coma, of which two were fatal. There were two other fatal cases. In one of these the picture was that of a right hemiplegia, with aphasia and in this case a large sub-dural hemorrhage was found on autopsy. In the second case, in which the symptoms had been coma, with Weber's syndrome, autopsy showed intense congestion, but no gross lesion. The congestion was greatest in the region of the pons where masses of parasites and pigment appeared. The other cases reported are as follows: Two with meningitic symptoms, one with a Landry syndrome, and one with polyneuritis, all of which recovered rapidly under treatment with quinine.

The Action of Salicylic Acid and Chemically Allied Bodies in Rheumatic Fever.—Stockman (Brit. Med. Jour.) reports some results of clinical observations and laboratory experiments concerning the drugs in use in the treatment of rheumatic fever. Comparing salicylic acid with numerous chemically allied substances, the author finds the acid and its sodium salt the most efficient as anti rheumatics. The efficacy of other substances is proportional to the amount of salicylic acid which they yield after ingestion; those which yield no salicylic acid are practically inert. Acetylsalicylic acid (aspirin) has not only a specific anti-rheumatic but also a non-specific analgesic action, due to the fact that some of it is absorbed and exerts its action unchanged. Its specific anti-rheumatic action depends upon its yield of salicylic acid, the liberation of the latter occurring in the alkaline duodenal juice. Of local applications, the author finds methyl salicylate of real efficacy as an analgesic, due he thinks, to its local absorption. A more powerful remedy than any now known is needed for the treatment of long-standing cases of rheumatic fever and for the prevention of endocarditis.

Treatment of Glandular Tuberculosis.—Struthers Stewart (Journal of Vaccine Therapy) records his results in the treatment of 54 cases of tuberculosis of the glands of the neck with tuberculin. He always commences with the small dose, 1-200,000 mgm., increasing it gradually till a slight reaction is obtained, and the patient can stand 1-200 mgm. without any reaction. A successful result after six months' treatment must be regarded as a favorable case; with mixed infection the duration of treatment will be much longer. He prefers to deal with each organism separately; the administration of mixed vaccine has many disadvantages. It is impossible to say to which of the organisms the reaction is due, and therefore which should be increased, and there is less risk of development of hypersensitiveness to one or other of the vaccines. On the slightest sign of fluctuation, the glands should be removed; after excision of the glands, a course of tuberculin should be administered. This may be regarded as the ideal treatment. The worst treatment is merely to open a tubercular abscess resulting from the breaking down of a tubercular gland.

Appendicitis in Children.—Mitchell (British Journal of Children's Diseases)

mentions forty cases, in which the initial treatment varied greatly. All were subjected to surgical treatment finally. The ages varied between 14 months and 13 years, the average duration of the illness being five days. Nausea and vomiting were not prominent symptoms, though abdominal tenderness and rigidity were present in every case at some time of the illness. A definite previous attack occurred in six cases, though there was a history of stomach in a much larger proportion. Four main groups were noted: (1) In nine cases a large walled-off abscess impinged directly on the abdominal wall. There were three deaths, due, respectively, to septic peritonitis, intestinal obstruction, and exhaustion. Of the recoveries five needed further operation for the removal of the appendix or cure of a ventral hernia. (2) Five cases showed localized abscess, only reached after opening the peritoneal cavity. One death occurred seven days after a second operation for subphrenic abscess. (3) Eighteen cases showed a spreading diffuse peritonitis, with gangrenous appendix in all but one case. Six deaths occurred—three within twenty-four hours of operation. Operation for ventral hernia was needed in several of the recoveries. (4) Eight cases showed a gangrene ous appendix without peritonitis. There were no deaths, and in these the average duration of illness before operation was under twenty-four hours. In all, there were 40 cases, with 10 deaths, a mortality of 25 per cent., while in all cases operated on during the acute stage before infection had visibly extended beyond the appendix and its peritoneum, the mortality was nil. A simple enema was given before operation, salines with glucose and bicarbonate of soda continuously every two or three hours for twenty-four hours after. The affected area was well packed off, free pus mopped away, the appendix removed, and drainage employed in all but one case. He concludes that appendicitis in children is a dangerous condition, and deceptive because the stage of the disease is hard to determine. Cases in the catarrhal stage often recover without operation, but after a certain point the disease advances rapidly and often kills. Localized abscess is very dangerous in infants especially. Children are bad subjects for acute septic peritoneal infections, owing to the high position of the appendix in the abdomen; peritonitis is often diffuse from the first. Early diagnosis is everything.

Prescribing Glasses for School Children.—Bradburne (British Medical Journal) says that, after the nature of the refraction has been ascertained by the mirror test, the question arises as to the standard of vision which would justify us in not ordering glasses. This question cannot be answered definitely, as so much depends upon the "status" of the child; if poor and likely to remain one of the laboring classes, a standard of as low as 6/12 vision might be allowed to pass unglassed, provided, of course, that the case be not one of short sight. If, however, a clerkship or similar calling form the future outlook, it would be necessary to raise the standard to at least 6-6 in one eye and 6-9 in the other.

Cases of astigmatism come under a different category; it is advisable to correct all cases in which the axis of the astigmatism in one or both eyes is oblique, or when it varies in direction in either eye, or when present in one eye and not in the other. The reason for this is the strain which oblique astigmatism makes on the obliques in the interests of binocular vision. Low degrees of astigmatism when at right angles would probably pass the test by the letters, and unless giving rise to symptoms need not be corrected. If symptoms arise they must not be sought for in the eyes alone, but in the effects on the general health and the progress which the child makes at his lessons. A weak, anemic child, or a mentally backward one, becomes wonderfully transformed when small degrees of astigmatism are properly corrected.

Every short-sighted case requires to be fully corrected, and, what is still more important, should be examined again in six months' time to ascertain if the case be progressing. If no change be found at the re-examination the next need only be after an interval of twelve months, which should be repeated yearly for at least three years Any alteration calls for re examination in six months. The prescribing of glasses does not end the management of these cases; it is the duty of the inspector to see for himself that the position of the child's desk is at a proper height, that the light is good, the print of the books large and clear, and the general health of each child should be made the special care of the family medical attendant.

The Dr. says that the management of eye cases under the Act consists in detection of visual defects and the adoption of appropriate measures for their rectification. This does not entail, as some authorities seem to think, the right to treat themselves, or, on the other hand, to flood the out patient department of the hospitals. Many authorities now are adopting the intermediate and wiser plan of employing a part time specialist, leaving those requiring hospital treatment to attend such places, and placing the simpler cases under the management of the inspectors themselves to deal with. It is

this latter aspect of the case which requires consideration—that is, how far is the medical inspector justified in undertaking the treatment of the eye cases he meets with?

Infant Feeding in Elizabethan times.—Forsyth at a recent meeting of the Royal Society of Medicine, publish in the British Medical Journal, read a paper on the history of "Infant Feeding in Elizabethan Times and Onwards." Tracing the changes in breast feeding through nearly 400 years, the speaker showed that in each century the period of sucking had steadily declined. Beginning in the fifteenth century at two to three years—a duration which is still customary among, for example, the Japanese and the Greenlanders—it had become eighteen months to two years under the Stuarts, one year in the Georgian days, and now lasted only about eight months. Step by step the mother had been supplanted, first by the wet nurse and later by the sucking bottle. The rise and fall of the wet nurse, who reached her palmiest days in the eighteenth century, were described, together with the social evils that she brought with her. Artificial feeding was quite unknown until the time of the Hanoverian succession, and even then the choice of food was limited to bread and water pap. A little later cow's milk came into use, and the speaker showed that the profund suspicion of all artificial methods was to be accounted for by the sanitary condition of the people in Tudor and Stuart times. Cow's milk, however, for more than a century after its introduction, was held in general disrepute, for the reason, no doubt, that a widespread prejudice against boiled milk existed among all clases. In the nineteenth century three notable developments were witnessed, first, the invention of the sucking bottle; secondly, the manufacture of proprietary foods; and thirdly, the final acceptance after long struggles of artificial methods. The original feeding bottle was a cow's horn, to the tapering end of which were tied a couple of pieces of leather, sewn together like the finger of a glove, and the babe sucked its milk between the stitches. The gradual stages by which this horn developed into the modern hygienic feeding bottle were traced. Finally, the more recent developments in the methods of feeding during the last fifty years were described. In conclusion, the speaker, recalling the striking decline in the duration of breast feeding and the steady progress of artificial methods, glanced at the future of infant feeding. Did it lie with the method of nature or with the methods devised by man's ingenuity? His experience had been that medical men, more often than was sometimes thought, supported the bottle against the breast, and he thought, that in doing this they were showing no more than a practical appreciation of the modern trend of infant feeding.

Use of Iodine Vapors in Otology.—Chapellier (Archives generales de medecine) reports good results from blowing iodine vapor into the tympanic cavity in a case of chronic otitis media in which the mastoid had been opened, but discharge of thick pus continued through the meatus. The apparatus used consisted simply of an ordinary flat ink bottle, provided with a perforated cork through which were passed two short glass tubes, one connected with an atomizer bulb and the other leading through a rubber tube to a small curved cannula. Before use, a small quantity of iodoform was placed in the bottle, and the tip of a thermocautery (or wire heated in a flame) brought near the iodoform to set free iodine fumes from it. The cork with the two tubes was then inserted, and the tip of the cannula pointed toward the aditus and the iodine fumes blown into the tympanic cavity. Previous to the insufflation, the meatus and mastoid wound were cleansed, the passages cleared—by the Valsalva method—and the wound and meatus again wiped out. After the insufflation further cleansing was practiced and sterile gauze inserted in the canal and wound.

In a few days the purulent discharge rapidly diminished. First, it became serous, remaining thus for three days; then only a small drop of fluid collected on the gauze in the meatus. Next, the tympanum underwent rapid resolution, and dressing of the mastoid wound could be carried out in the usual effective manner.

An attempt had previously been made to pass tincture of iodine into the tympanum in this case, but the discharge, instead of diminishing, had increased. The iodine vapor, however, by virtue of its great diffusibility, and with the help of the Valsalva procedure, unquestionably reached the tympanic cavity, as the patient tasted and smelled the iodine. The insufflations were given daily.

The Influence of the Lipoids on Drug Action.—Vernon (British Medical Journal) states that "all living tissues contain lipoid substances which are now thought to be no less an essential constituent of protoplasm than the proteins themselves. They are largely composed of lecithin and cholesterin, probably in ester-like combination." He further remarks that "the lipoids form a kind of a cement holding together the various constituents of the protoplasm, and any substance which dissolves in them alters their physical condition and cohesive

power." This shows their importance in the various phenomena of cell life, for serving as they do as membranes which permeate the protoplasm, they must exercise a marked influence upon the processes of cellular absorption. It thus follows that those substances for which the lipoids have an affinity will be more readily taken up by the cells than others. Vernon refers to the researches of Meyer and Overton, according to which the narcotic action of alcohol, ether, and chloroform depends on their solution in the lipoids. There is also reason to believe that in the administration of other drugs, such as iodin, in which the object is to exert a direct action upon the cellular metabolism it would be advantageous, as suggested by some pharmacologists, to administer them in a form approximating to the lipoies in composition. Clinical facts seem to corroborate this view. For instance, if iodin is given in the form of the iodobehenate known as sajodin, it is much more slowly eliminated from the system than iodide of potassium. Winternitz thinks that this is due to the fact that the fatty acid forming the basis of sajodin, being similar in composition to the lipoids, is more apt to be absorbed, retained and assimilated by the cells than potassium iodide which is very rapidly excreted. If this train of reasoning is correct, there is no doubt that the production of various remedies based upon such principles will mark an important advance in medication.

New Light on Gastric Ulcer.—Bergmann (Muench. med. Wochenschr.) says that a great deal of light has been thrown upon a variety of obscure affections by the work of Eppinger and Hess on the vegetative nervous system. The latter may be divided into two mutually antagonistic and complementary divisions, one consisting of the sympathetic system, the other of the vagus and its congeners. Many neuroses and allied disorders can be more precisely defined as over irritable conditions of one or the other of these systems, and such patients may conveniently be classified as vagotonic or sympatheticotonic individuals. This differentiation has also a pharmacological significance, since members of the atropine group depress the vagal and stimulate the sympathetic systems, while pilocarpine, adrenalin and others have the opposite action.

On the basis both of a critical examination of the work of others and of his own observations, v. Bergmann adduces evidence to show that gastric or duodenal ulcer may be regarded as the consequence of a vagotonic condition. In the first place the secretory abnormalities, especially the hypersecretion, characteristic of gastric ulcer may be regarded as manifestations of a vagus over-irritability. The same is true of the pylorospasm. Moreover in 58 out of 60 cases of gastric ulcer, carefully studied from this point of view, definite evidence of a vagotonic status could be made out. Moreover, when such patients are given a bismuth meal and examined before the radioscopic screen, a spasm of the gastric musculature can often be made out, so severe sometimes as to constrict the lumen of the stomach into two non communicating halves. This spasm is usually accompanied by much pain, and it may be that the pain of gastric ulcer is due, not to irritation of the raw surface, but to this spasm and its resulting pull upon the peritoneum.

There is reason to think, moreover, that this gastric spasm is the direct cause of the gastric ulcer. A spasm of this sort causes a nearly complete anemia of the area of gastric mucosa involved and, as Payr has shown, such an anemia is invariably followed by ulceration due to peptic autodigestion. The chronicity of such an ulcer results from the repeated spastic constrictions at the same spot. One of v. Bergmann's assitants has shown, in experiments not yet published, that hypodermic injections of pilocarpine and physostigmine invariably cause gastric ulceration in rabbits, in one case even leading to perforation. If killed soon after injection, such animals always show marked constriction of some portion of the stomach.

One result of the above observations and considerations is to eliminate the distinction between gastric neurosis and gastric ulcer, the latter being an occasional end-result of the former. Another result is to call attention again to an old remedy for gastric ulcer—namely, atropine. This drug, according to the new views, is indicated, not because it diminishes secretion, but because of its antispasmodic, antivagotonic action. It should be given in gastric ulcer persistently, for long periods of time. It may be that its greatest value will lie less in the cure than in the prevention of gastric ulcer. The next few years will certainly witness a great clarification of all of our notions in this field of medicine.

The Nature of Abdominal Rigidity.—Wadsworth (Medical Press and Circular, London) says that reflex rigidity can be produced experimentally by stimulation of appropriate afferent nerves.

Mackenzie has described the nature of abdominal tenderness and hyperasthesia in his book on "Symptoms and Their Interpretation." His suggestion is that the rigidity is also reflex.

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is so generally recognized as the main causative factor in many serious diseases—notably **tuberculosis, typhoid fever** and **other infectious ills**—that the first evidence of its development should always lead to its vigorous treatment. Fortunately the practitioner has in

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Text books on medicine do not sufficiently emphasize the presence of rigidity in cases of gastric and duodenal ulcer. It has been frequently demonstrated that ulcer of the stomach and duodenum has produced pain in the absence of any inflammation of the parietal peritoneum. But it is not so generally known that rigidity has been met with in cases where the parietal peritoneum was quite normal. The fact that rigidity of the abdomen is produced by stimulation of the central end of a sympathetic nerve is in accord with the above clinical observations.

The rigidity met with clinically in ulcer of the stomach or duodenum is confined to the epigastrium and involves the recti chiefly. If the ulcer perforates, then the rigidity becomes much more marked, but in the early stages it is confined to the upper abdomen, and during anesthesia this part of the abdomen is the last to relax. The rigidity met with in disease of the gall bladder is most marked in the rectus of the same side, but may involve the whole of the abdominal muscles on that side.

It was found that rigidity of the recti and the other abdominal muscles could be produced by stimulating the central end of the sympathetic nerves which supply the stomach, duodenum, pancreas, and the gall bladder. The contractions following the stimulation were tetanic, and lasted as long as the stimulus. The recti were divided into segments between their motor nerves. The upper segments became more contracted than the lower. This contraction was obtained after the vagi were divided in the neck. Hence the vagus is not the afferent path for these reflexes. The rigidity met with in disease of the vermiform appendix is also probably a reflex, because stimulation of the central end of the sympathetic nerves which supply this portion of the alimentary canal is followed by a contraction of the abdominal muscles.

Miscellaneous.

So-Called Heart Murmurs.

Steiner writes in reference to the exaggerated importance accorded to cardiac murmurs—with all due deference to the cardinal significance of the latter as symptoms of actual disease. He illustrates the possibility of over-valuation of murmurs by two case histories. The general tendency of all medical examiners is to disqualify a prospective risk whenever a murmur is heard on the ground that no one can assert with certainty that the subject is not the victim of a valvular lesion. The manual of instruction used in such cases states plainly that however faint the murmur, and even after but one examination, the examiner must reject or postpone the applicant. There is only one exaction laid upon him, viz., he must be sure that the sound is of cardiac origin. Thus if the ordinary examination in standing posture is negative, the applicant must throw extra effort on his heart by prescribed exercises and further be examined lying down and with the stethoscope. The examiner may only postpone in the case of young subjects. These commands make it easy for the examiner, but no real service is rendered either to the compaay or the applicant. Collateral subjects and notably that of the functional capacity of the heart are ignored. When we treat a patient with cardiac trouble we have always in mind the test of efficiency, not the acoustic phenomena. Numerous distinguished clinicians may be quoted to this effect. Murmurs are not necessarily indicative of endocarditis. If truly valvular in origin they may be due either to muscular or nervous action upon the valves. The first case cited occurred in a young man who was well nourished and apparently in florid health. There was no history of disease worth mentioning. During examination for military service a "cardiac defect" was brought to light. The subject was active all day long on a truck farm, was not fatigued at night. and danced and rode a wheel without effort. The author's examination made after considerable physical exertion yielded a pulse of 68, respiratio[1] 9. There was heard, however, over the apex and replacing the first sound, a long drawn, blowing murmur. This was at once pronounced congenital in origin, and without the least influence on the economies of the heart. Should an applicant like the preceding be rejected outright? Recently the young man broke his leg, as the result of a severe accident; yet his nervous and muscular system showed not the least reaction. The second patient was a German-American, who traveled extensively for a large business house. Always in a state of psychic tension from the exactions of his business, he further sustained great pecuniary losses in the panic of 1907. While sojourning at Kissingen a cardiac murmur was discovered, and was heard by the patient himself with the autostethoscope. The organ itself gave no trouble whatever. The author heard an intensive murmur, propagated from the apex to all the valves. Despite the demands upon the patient's energy the pulse and respiration were but 64 and 16 respectively. There was a transitory emphysema pulmonum, and both this and the murmur are certain to yield to a period of

rest. The murmur was doubtless of nervous origin, and technically would rank as initial insufficiency. In both the preceding cases there were no alterations in the cardiac chambers while the second pulmonal sound was normal. It was therefore impossible to estimate the degree of the defect. Compensatory states of the heart could be excluded. In support of his strictures on over-valuation of heart murmurs the author would further cite the statistics of survival of applicants rejected for "cardiac defects" (these naturally including actual lesions with compensation). These take cognizance of survival to 10, 15, 20, and 25 years.—Blatter f. Vertrauensarzte d. Lebensversicherung.

The Hypersusceptibility of Children to Opium.

The hypersusceptibility of children to opium is one of the most potent reasons for employing a substitute in its place in the treatment of diseases of children. It has been found that Papine (Battle) is well borne by children to whom opium or morphine was intolerable, but when it is remembered that in the manufacture of Papine, through a special process, the narcotic and convulsive elements of opium have been eliminated, the reason for this point of Papine's superiority over opium will be well understood.

Papine (Battle), as is well known, is a product of opium subjected to a process which while retaining the analgesic and sedative properties of the drug, separates from it its objectionable qualities, leaving the finished product of more than ordinary worth as an opiate for use in children.

Will Tour Europe.

Drs. J. P. Munroe, C. N. Peeler, C. M. Strong and A. J. Crowell will sail from New York July 3 for a two months' trip abroad. They will visit all of the great Continental centers, including Paris, Vienna, Berlin, Munich and the great watering places, such as Carlsbad, etc. Their destination is London where they will attend, August 5 to 13, the International Congress of Medicine. They expect to return about the first of September, although the bulk of the party are due to land August 23. Dr. Hubert Royster of Raleigh will also make the trip.

Dr. Albert Anderson.

Dr. Anderson has recently been elected superintendent of the Hospital for Insane at Raleigh. The trustees of that institution certainly acted wisely in selecting such a competent and prominent man to be at the head of that hospital. This institution is one of the oldest of its kind in this section of the country. The trustees have made few changes. Dr. Eugene Grisom, Dr. Jim McKee, and Dr. L. J. Picot are all men who have made fine records at this institution as superintendents, and there is no doubt that Dr. Anderson will come up to their high standard of proficiency.

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Dr. Charles E. Moore and Dr. W. H. Braddy of Greensboro, N. C., are now associated in practice limited to general surgery, operative gynecology, office and consultation work, effective May 1, 1913.

Tuberculous Colitis and Pericolitis.

Piery and Mandoul on the basis of observations made on 20 cases conclude that a new painful intestinal syndrome may be described. This is designated "tuberculous mucorrheic enterospasm." This is often a manifestation of the inflammatory tuberculosis of Poncet and Leriche. A large number of cases of plastic colitis and pericolitis are similarly the result of an inflammatory tuberculous process. In many cases of Hirschsprung's disease a tuberculous factor is present.—Revue de Medecine.

Further Experience of the Specific Curative Action in Amebic Disease of Hypodermic Injections of Soluble Salts of Emetine.

Rogers, Calcutta, India, reports cases of

amebic dysentery, both acute and chronic, with hepatitis as well as case with hepatic abscess, and case with abscess of the spleen, cured by the hypodermic use of emetine. Both the hydrochloride and the hydrobromide of emetine are equally useful. Uses ½ gr. at dose and has used as much as 1 gr. hypodermically. Conclusions: "We have, in my method of the subcutaneous injection of soluble salts of emetine, a specific treatment of amebic hepatitis and amebic dysentery, which is so rapidly beneficial, in the latter as to be also of great diagnostic value between that and other causes of the passage of blood and mucus in the stool." —The British Medical Journal.

The Use of Horse Serum in the Treatment of Tuberculous Lesions.

Cavallee reported at the meeting of the Medical Society of the Hospitals of Paris, April 4, 1913, that he had obtained good results with the use of horse serum in the treatment not only of external tuberculosis but also of the early stage of pulmonary tuberculosis (anemic pregerminative).—La Presse Medicale.

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Seven-day Fever in the Panama Canal Zone.

Deeks, chief of the medical clinic of the Ancon Hospital, reports an outbreak of a fever of doubtful nature which has spread rapidly and caused serious illness, though without any mortality hitherto. It began with the two post-office clerks who deal with the incoming home and foreign mails, spread to the rest of the mail clerical staff of the post-office, and thence to the occupants of neighboring apartment houses. It is apparently a highly infectious disease, the infection being conveyed during the incubation period and not after the symptoms have appeared. There is no special prodromal stage; the onset is abrupt, with rigors or chilly sensations, followed by a sharp rise of temperature to 101-104° F. After six days of practically continued fever with small morning remissions a rapid fall occurs. Relapses do not occur. The pulse and respiration are but little quickened. The spleen is always palpable and definitely enlarged; not so the liver. There is no special blood change, but the urine always contains albumin with a few casts. In two cases the albuminuria was severe and the casts numerous; even in these, however, defervescence was quickly followed by disappearance of the urinary changes. During the attack the chief symptom is anorexia; occasionally there is vomiting at the onset. Vague pains, such as are the rule in pyrexial states, were noted in the head, back, and limbs. Sudaminal eruptions are common, and Dr. Deeks thinks that there is in most cases a general erythema soon after the onset. In severe toxic cases petechiæ have been noted. The incubation period is probably about ten days. All efforts at discovery of the causal infective agent have hitherto failed whether in the blood or excreta. That the disease is not malarial is shown by the course of the fever and the absence of plasmodia from the blood; it does not belong to the typhoid group of infections, since it fails to yield any of the specific serum reactions, and its course serves to differentiate it from dengue, influenza, and typhus fever. The treatment adopted (quinine and salicylates) has exercised no definite effect on its course. Dr. Deeks thinks this disease is identical with that described by Professor Leonard Rogers as "seven-day fever of Indian ports," and that the fact that the epidemic began with post-office clerks sorting mails from foreign parts indicates its letter-borne origin. The epidemic—the first of its kind since the American occupation of the Canal Zone—has spread from Ancon to Panama City. Dr. Deeks remarks that it will be interesting to see if it remains in the Panama area in epidemic form.—The London Medical Lancet.

A Peculiar Case of Ascaris Lumbricoides.

I met a Mohammadan girl 16 years of age in my private practice when I was in Ballia district. She came of a poor family but was well nourished and healthy, and was under the treatment of a native hakim who treated her for any brain disease. The history of the case revealed that a week before the onset of the last illness she had diarrhœa with some nausea. On the seventh day she got a fit somewhat resembling that of hysteria, but was well for a couple of days. Bowels were costive. On the fourth day of the fit she got a colic pain in her abdomen followed by another fit resembling the former. This was relieved by some native medicine. Three days after she vomited and felt a round ball rolling along the left side and upwards of her navel. This disappeared by poppy head fomentation and the discharge of a wind. Then she had an

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attack of fever with rigor which did not abate till I was called. On visit I found her delirious, pulse 120; temperature 102.4, breathing somewhat exaggerated, did not respond to call or talking, pupils dilated.

I could not judge much from the above history which was given to me by her grandmother—an illiterate old villager—and considering the general conditions I treated her as a case of malaria with hysteric temperament and gave her ordinary quinine mixture with magnesia. In the evening, she passed two motions with one round-worm. She felt relieved and returned to senses. I was called for again and gave a few doses of santonine with castor oil emulsion. The patient passed four motions with four worms. As the case interested me, I went to see her again next evening when I found the temperature 99 and general condition much improved. I put her on milk diet with a little brandy for two days. I gave another few doses of santonine and castor oil and she passed three worms again. She recovered within a week. I was astonished to find worms with such symptoms.—Shyam Behari Gupta, Bareilly.

Subcutaneous Injections of Oxygen in Dyspnea.

Oxygen injections are of value in dyspnea of whatever cause. In dyspnea due to mechanical obstruction it affords only temporary relief but in the interval the obstruction may possibly be removed. In pneumonia and in tuberculosis the fever is reduced, the respiration becomes slower and deeper and the cyanosis disappears. In several instances comatose patients have regained consciousness.

Sapelier, of Nanteræ, has devised a simple apparatus consisting of two glass bottles connected by a rubber tube, one containing water and the other, which is graduated, contains oxygen. A glass tube passes through the stopper of the oxygen flask and is provided with a rubber tube, in the free end of which is inserted a platinum needle. When stopcock is opened the oxygen escapes through the platinum needle and the water rising in the oxygen flask shows the amount of gas consumed. From

300 to 1000 ccm. can be injected with safety at one time. No especial precautions are necessary, beyond sterilizing the platinum needle in the flame, and inserting it slowly so as not to puncture a vein.—La Tribune Medicale.

Treatment of Bronchial Asthma.

Rne use of epinephrin in a fine spray, to be inhaled by the patient, is advocated by the author in asthma. He has devised a small atomizer, suitable for carrying around in the pocket, and with which the patient can arrest a paroxysm whenever he feels it coming on. The ordinary 1:1000 solution of epinephrin is placed in the atomizer,and upon pressing the bulb is broken up into a spray so fine that it can be driven through a narrow tube coiled on itself. This fine division is essential, if the remedy is directly to reach the bronchioles, which it tends to dilate. In established severe attacks, the following combination is recommended: Epinephrin solution, 9 c.c.; atropine sulphate, 0.01 Gm.; cocaine hydrochloride, 0.025 Gm.; distilled water, 1 c.c. No ill effects were ever observed from the spray. The action of epinephrin thus administered appeared to be of greater duration than where larger amounts were injected hypodermically. The intervals between attacks were prolonged and the attacks themselves rendered less severe.—Staubli, Munchener medizinische Wochenschrift.

Action of Epinephrin on Veins.

Considerable interest attaches to the action of epinephrin on the great veins near the heart. It has long been known that in the mammal the great veins, which correspond in some ways at least to the sinus venosus in the frog, beat rhythmically with the heart proper. The authors had previously been entirely unsuccessful, however, in obtaining a spontaneously contracting ring preparation of the superior vena cava. They have now found that a quiescent ring preparation of the superior vena cava of sheep, near the heart, can be made to beat vigorously and rhythmically by the action of 1:20,000 epinephrin. The action of the drug is a continuous stimulus to which the muscle responds by discontinuous (rhythmic) contraction. The experiments further indicated that the accelerator-augmentor nerve-supply of the heart and the rhythmically contractile tissue extend up the superior vena cava for at least 6 to 8 mm. from the veno-auricular junction in the sheep's heart. The induction by epinephrin of rhythmic contraction in the quiescent superior cava, seems to the authors, on the whole, in accordance with the myogenic theory of mammalian heart rhythmicity.

It was also shown by the authors that 1:100,000 epinephrin, acting upon ring preparations of veins remote from the heart —jugular, mesenteric, superior and inferior vena cava—caused a diminution in their caliber, as has already been known to be the case with arteries. These veins, therefore, probably contain venoconstrictor fibers from the thoracicolumbar sympathetic system.—Gunn and Chavasse, Royal Society Transactions, London.

Renal Decapsulation in Acute Toxic Nephritis.

In two cases of acute mercurial intoxication decapsulation of the kidneys was resorted to by the author. The first case was that of a woman who swallowed 2 grams (31 grains) of the oxycyanide of mercury. Notwithstanding the early induction of emesis with ipecac, bloody diarrhea, obstinate vomiting, copious salivation, violent stomatitis and total anuria soon appeared. On the fourth day, the urinary suppression persisting and the general condition becoming worse, decapsulation of the right kidney was practiced. The organ was greatly enlarged and hyperemic. On the following day, 15 c.c. of urine could be removed by catheterization, and on the succeeding days the amount progressively increased until, on the fifth day after the operation, 30 c.c. were obtained with the catheter and an additional amount was voided spontaneously. Nonetheless the general state became progressively worse, hematemesis and melena appeared, and the patient succumbed on the sixth day after the operation.

In a second very similar case, in which corrosive sublimate had been ingested, the right kidney was decapsulated on the sixth day. On the following day 150 c.c. of urine were obtained with the catheter, and after this the patient passed urine spontaneously. Hemorrhagic phenomena later appeared, however, as in the first case, and the patient died on the ninth day. In this case an autopsy was permitted. The stomach, cecum, and transverse colon were found ulcerated; the left kidney was enlarged and hyperemic, while the right appeared normal; the liver was enlarged.

Although neither of these patients was saved by the intervention, all chances of death by anuria were eliminated in each. The operation was well borne and in the opinion of the author should always be tried when toxic anuria has become established.—Tisserand, in The Lyon Chirurgical.

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Prevention of Peritoneal Adhesions.

While the introduction of foreign bodies into the peritoneal cavity is, as a general rule, to be avoided, the writer believes that, in cases where extensive raw surfaces have been exposed as the result of breaking down peritoneal adhesions, the best method to prevent the latter re-forming is to introduce several ounces of sterile vaselin oil before closing the abdomen, and then at the earliest possible moment to encourage peristalsis; firstly by hypodermic injections of pituitrin and then by enemata and by purgatives. The absorption of vaselin oil from the peritoneal cavity is not complete for at least ten days, and if during this period the bowels be kept moving a minimum of fresh adhesion will be secured.—Wilkie, in The London Lancet.

Pituitary Body and Diabetes Insipidus.

In discussing the relationship between the hypophysis and diabetes insipidus the author states that it is now well known that the secretion of the anterior glandular lobe of this organ is of importance in connection with skeletal development, and that excessive function of this lobe, as in the presence of adenoma, leads to acromegaly. The posterior or nervous lobe plays an important role in relation to tissue metabolism; disturbance of its functions brings on the adiposogenital syndrome of Frohlich. Schafer has drawn attention to the intermediate lobe of the hypophysis or pars intermedia, which is rich in colloids. In animal experiments he was able to show that this part of the organ had a distinct influence upon the renal vessels and parenchyma, and that the diuretic action of the pituitary was not dependent on the secretion of the anterior lobe, but upon that of the posterior lobe and especially that of the pars intermedia. This relationship of the pituitary to the urinary function had already been suggested by numerous clinical observations. Thus it was known that acromegaly and the dystrophia adiposogenitalis are frequently accompanied by diabetes insipidus, that gummatous meningitis of the base of the brain, and in fact all tumors at the base and all local affections capable of influencing the hypophysis, sometimes lead to diabetes insipidus. In support of the facts experimentally shown by Schafer the author reports the case of a woman of 37 years in whom, about two months after removal of a cancer of the breast, there developed metastatic lesions in various parts of the body, in particular in the hypophysis. Simultaneously there appeared marked thirst and polyuria, the volume of urine, which was of low specific gravity, varying between 10 and 19 liters, though toward the last it fell to 4 liters. At the autopsy, the kidneys, cerebrum, and cerebellum were found normal. Cancerous foci were found in various viscera. In the sella turcica, one tumor mass had completely obliterated the posterior lobe. The function of the latter had thus been destroyed, and the irritation occasioned by the tumor can have been exerted only on the anterior lobe and the pars intermedia, which was intact. The experiments of Schafer having shown that the anterior lobe had no influence on the urinary secretion, the conclusion is reached that the insipid diabetes in this case was due to excessive function of the pars intermedia owing to irritation by the tumor involving the posterior lobe.—Simmonds, Munchener medizinische Wochenschrift.

Use of Salvarsan During Pregnancy.

For two years all pregnant syphilitic women under the author's observation were given intravenous injections of salvarsan in doses of 0.2 to 0.4 Gm. The injections were given weekly, each patient receiving from 4 to 6. Fourteen women who had shown during pregnancy manifestations of recent and active syphilis were thus treated, and each gave birth at term to a living child, generally of normal weight. None of these infants exhibited stigmata of inherited syphilis. Four of them died not long after birth, but in each instance owing to some accidental cause. Two women with syphilis of long standing, and who had already had several miscarriages, were enabled to carry pregnancy to a successful conclusion with the aid of the salvarsan injections. From these cases it may be concluded that salvarsan is not only not deleterious in pregnancy, but exerts a favorable influence on the latter.—Jeanselme, Societe medicale des hopitaux de Paris; Semaine medicale.

Hypersensitiveness to Quinine and Bromine.

The author reports a successful attempt to produce passive anaphylaxis with the serum of animals which had been given salts of quinine and bromine for a long period of time. He used well-developed rabbits and guinea pigs, which were fed alike and all placed under the same conditions. They were given intraperitoneal injections of quinine or bromine salts daily until they were able to withstand without bad effects doses otherwise lethal. One of the animals was then bled, about 10 c.c. of activated serum being obtained, and the latter injected intraperitoneally or intravenously into another rabbit or guinea-pig

SINKINA

SIN=without
KINA=quinine

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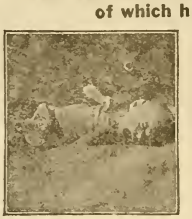

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which had not been treated with the salts. Forty eight hours and sometimes even two weeks after the injection of the serum, an injection of a quinine or bromine salt was found to produce typical anaphylactic symptoms. The experiments were much more positive in the case of the quinine salts than with the bromine salts.—Manoiloff, Centralblatt fur Bakteriologie.

Suiphuric Acid in the Treatment of Carbuncles, Boils, and Pyogenic Infections.

The authors report results obtained by the administration of dilute sulphuric acid in cases of staphylococcic and some streptococcic infections. The treatment consists in ffiving internally the dilute acid in 20- or 30-minim doses, each dose diluted with 2 oz. of water, every four hours. In cases of carbuncle treated by this drug in large doses (small doses are not of the slightest use) changes are observed to take place in the following order: First, within twenty-four hours the infiltrated area of tissue becomes strictly circumscribed; then the slough is observed to soften; during the next few days pus is freely discharged, and the whole affected area shrinks and healthy granulation tissue forms, filling up the cavity until the part is healed. Cicatrization takes place in a comparatively short time. The only external application is a dressing of carbolized petrolatum (1 in 20).

In cases of what would appear to be streptococcic infections, such as those resulting from abrasions, or punctures by bones of "high" game, or inoculation by decomposing animal matter, the patient showing early symptoms of septicemia, the high temperature is quickly reduced and the pain and swelling and malaise gradually subside, the patient progressing uninterruptedly toward convalescence. Where the lymphatics are inflamed and the glands enlarged and painful, these conditions in a few days also disappear.

The authors have treated in the same way blind boils, which are aborted and completely disappear. Recurrent crops of boils and pimples in different parts of the body, and severe cases of acne have been found to yield readily.

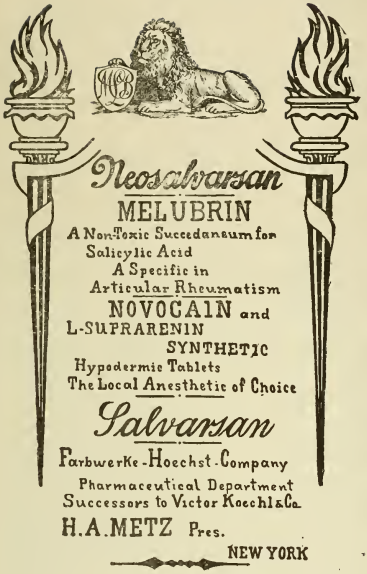
The remedy was also tried in other conditions where pyogenic organisms were responsible for some of the symptoms observed, e.g., cases of bronchiectasis and pulmonary tuberculosis. These were found to be benefited; the sputum became less purulent and much less in quantity, and in tuberculous cases the fluctuations of temperature were diminished.—Reynolds and Reynolds in The London Lancet.

Tuberculous Colitis and Pericolitis.

Piery and Mandoul on the basis of observations made on 20 cases conclude that a new painful intestinal syndrome may be described. This is designated "tuberculous mucorrheic enterospasm." This is often a manifestatation of the inflammatory tuberculosis of Poncet and Leriche. A large number of cases of plastic colitis and pericolitis are similarly the result of an inflammatory tuberculous process. In many cases of Hirschspring's disease a tuberculous factor is present.—Revue de Medecine.

Quinine Sulphate in the Treatment of Basedow's Disease.

This remedy was first employed in goitre by Lancereaux and Paulesco, and after having given improvement in several cases but cures in none, it has been abandoned by most therapeutics. Sermensan gave it in very small doses daily for four months to a woman who had tried various treat-



ments without relief. When small doses are not effective the drug may be pushed to its physiological limit. The chief point in the treatment is to continue it for a long period, months or even years.—La Tribune Medicale.

Treatment of Menorrhagia in the Presence of Acute Inflammation of the Uterine Annexa.—Koch (Semaine medicale) gives a new procedure for the treatment of profuse menorrhagia accompanying acute annexitis. Subcutaneous injections of pituitary extract proving ineffective in these obstinate cases, even when doses of 2 c.c. were given on several successive days, the author resorted to injections of ergot and of pituitary extract directly into the uterine muscle itself.

After the usual preliminary antiseptic preparation of the parts, the anterior lip of the cervix was fixed with a double tenaculum—not drawn forward, however, or but slightly—and a hypodermic needle introduced into it to a depth of one or two centimetres in a direction parallel with the long axis of the uterus. The barrel of the syringe was removed for a moment, in order to make sure that no blood vessel had been entered by the needle, then reapplied and the injection made.

This procedure was carried out in ten patients. Injections of an aqueous extract of ergot proved effective, the bleeding being arrested almost at once, although where the uterus contracted firmly, some pain was experienced for ten to twenty-four hours, and at the end of this time, bleeding generally recurred, a repetition of the injection becoming necessary. Pituitrin extract was next tried. With this agent, the headache, cardiac acceleration, pallor, and nausea sometimes caused by ergot were avoided, and the effect on the hemorrhages was good, although less pronounced than with ergot, some slight oozing still taking place. There was noted with this drug the same possibility of a return of bleeding when the uterus relaxed as with ergot, but, on the whole, the use of the pituitary preparation is preferred by the author.

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Creative Art and Sex Emotion.

Chaucer noticed that in the spring "smale foules maken melodie . , . so priketh hem nature in her corages." The male bird sings his sweetest song and puts on his brightest plumage at the time of year when he goes acourting. He does all this to attract the female, though perhaps he is not conscious of it and thinks that his song is an inevitable expression of the joie de vivre that courses through his veins; but seen objectively, it is merely one of nature's ways of keeping up her idiosyncrasy for preserving the race at all cost. Anyway, the bird sings his song—a creative act of a high artistic order—during the annual period of sexual activity. This period alternates with a longer one during which male and female live together in a practically asexual state and then the sex song is never heard. In the human race sex feeling exists persistently through the whole period of sexual life, and like the birds, the human male expresses himself in creating color and music. A superior creative instinct is as characteristic of the human male being as is the song of the male bird, but as men and women are in the plane of pure intellect often absolutely equal, so we get occasionally a tendency to desexulization, male showing female tendencies and vice versa, and these cases supply us with excepions to the rule. Still, on the whole in the spheres of pure art, the male is creative, and the female appreciates the creation. Even where we find the female assuming the function of originator the work has usually a more superficial appeal than that of the male; it may show qualities of grace, dexterity, and a light beauty, but seldom or never does it possess the sense of power and the deep appeal of the best male art. Of course, this is a difference of kind, not of degree. Women have an intenser appreciation of mens' art than any man. And the sum tatal of the whole matter is that nature wants the race to continue—"so careful of the type she seems, so careless of the single life." All around us and all the time nature fights for the eternal preservation of her precious germplasm.—The Medical Press. London.

The CHARLOTTE SANATORIUM

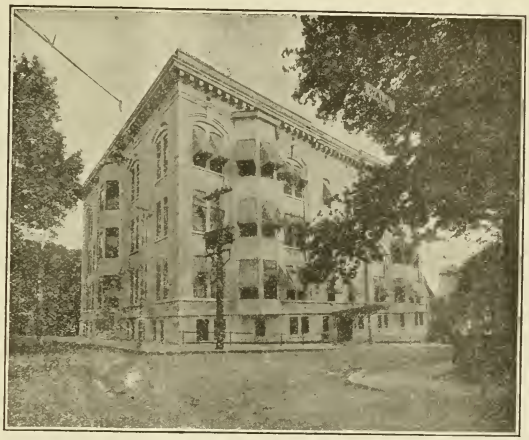
LABORATORY-DEPARTMENT

CHARLOTTE, N. C.

The attention of the physicians and surgeons is called to the advantages which this institution offers in methods of laboratory diagnoses.

Many physicians through lack of time, technical training or laboratory equipment find it difficult to utilize the many methods of microscopic and clinical examinations so essential to a proper diagnosis.

To the physicians and surgeons of the Carolinas and Virginia, the Charlotte Sanatorium Laboratory offers, at moderate cost, facilities for such examinations. Animal inocculation, chemical, bacteriological and histological examinations will be made as the case requires.



The Main Building Front View.

The following directions are suggested for the benefit of those who may forward material for examination.

All specimens should be accompanied by a brief note descriptive of the clinical condition and a special reference to the character of the examination desired.

Seventh Street Entrance.

The name and address of the person to whom the report is to be sent should be clearly indicated.

Sputum—should be sent in a clean, wide-mouthed bottle. The ordinary vaseline bottle answers all purposes. The morning sputum is preferable. That expectorated during meal time should not be included.

Blood For Widal Test. — After carefully washing, prick the lobule of the ear or the tip of the finger. The first drop of blood should be wiped away. Two large drops are then placed on a glass slide, one near either end, and allowed to dry without being spread out on the suface of the slide. After they have dried, the

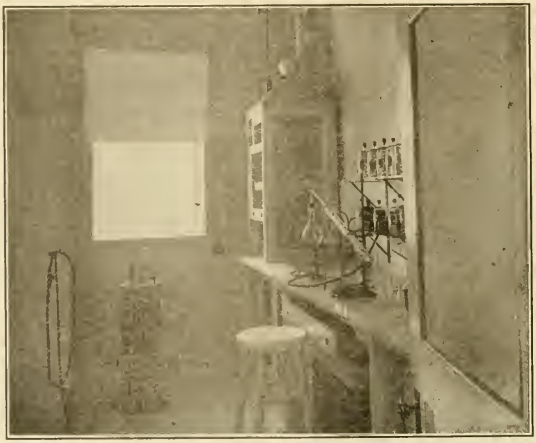
slide is carefully placed in a clean envelope and box, and then mailed to the laboratory.

Second Method. – Collect three or four drops of blood in a capillary tube; then seal tube over gas or other flame and send to the laboratory. (Capillary tubes will be sent upon application to the laboratory.) Blood for malarial parasites differential count, etc., should be sent to the labaratory on glass slides. As thin a smear as possible should be made.

Clinical Laboratory, Showing Arrangement of Desks, Miscroscopes Microtomes, Incubator, Centrifuge, Etc

Smears For The Detection of Gonococci.— One drop of purulent discharge from the urethra should be placed at one end of a clean slide and a thin smear made over the surface of the slide.

In collecting a specimen from a female patient, care should be taken to obtain the drop of material directly from the seat of the discharge. This should be done with a sterile swab or other instrument. Two smears should always be sent to the laboratory.



Clinical Laboratory, Showing Autoclave, Hood, Operating Tables, Etc.

Urine.—for bacteriological examination should always be catheterized directly into a bottle that has been rendered sterile by boiling 15 20 minutes. No chloroform or other preservative should be added. When sending a specimen of urine to the laboratory, always mark it with the date, the name of the patient and of the physician for identification, and specify whether a chemical or bacteriological examination, or whether Ehrlic 's diazo test for typhoid fever is desired. The quantity should not be less than four ounces.

Pathological— material from either operation or autopsy should be wrapped in gauze moistened with salt solution surrounded by oiled paper or rubber protective. When it is not possible for material to reach the laboratory within twenty-four hours it should be placed in alcohol (80 per cent) or formalin solution (10 per cent.) Small fragments of tissue and the material from uterine curettage should be preserved always.

Tumors.—can be sent by mailing in wide mouthed specimen jars. They should rest upon a pad of absorbent cotton, which is placed in the bottom of the jar befor e

the tumoris dropped in

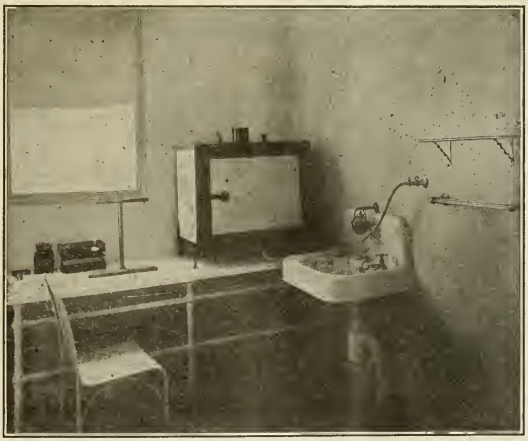
Feces.—should be sent in a clean, wide mouthed bottle. A large sterilized screw capped bottle will answer the purpose.

Wassermann's Test.—Since the advent of the discovery of 606 for the cure of Syphilis. the employment of the Wasserman test, both before and after its use, is conceded by all scientific investigators to be of the highest importance as a control to the curative effect of this remedy. The Charlotte Sanatorium Laboratory is specially equipped for carrying out this Wasserman Sero-diagnosis test for Syphilis.

(Clinical Laboratory, Showing Supplies, Working Table. Etc.)

Specimens sent to the laboratory for this test should be obtained as follows.

1st. By using an ordinary antitoxin syringe, and withdrawing the blood directly from the median basilic vein, as represented in Fig. 1 illustrates tourinquet applied, taken the blood from the vein by means of the syringe.



Clinical Laboratory, With Hot Air Sterilizer, Scales, Lavatory, Etc.

2nd. By means of capillary attraction, as illustrated in Fig. 11 represents empty capsule; tourinquet applied to finger. It is best to apply constriction to middle finger, and puncture the dorsal surface of the last joint of this finger rather close to nail with a sterile, and collect blood, as illustrated in Fig. 11.

After obtaining blood if capsule is used, as is shown in Fig. 11, simply place the curved end over a flame of a Bunsen Burner, alcohollam , or ordinary gas jet to seal same, and mail. If syringe or other means are employed, put blood in small test tue, allow to coagulate, cork, pack and mail as any other fraigle package. Atleast two C. C. should be withdrawn for this test. The syringe tubes, etc., should be clean and perfectly dry. It is the best, if possible, for patient to go to the laboratory and have the director of that department secure for himself the specimen of blood.

Milk.—The bacteriological examination of milk, requires certain precautions in the collection of the sample. Special instructions and proper containers will be sent upon application.

Stomach Contents.—should be sentin a sterilized bottle. Alarge vaseline or quinine bottle usually answers the purpose.

Fig 1.

Fig 11.

The following table gives the cost of many of the examinations made in this laboratory:

Smears and Stains (tubercle bacillus,) gonococci, etc. $1.00

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Stomach Contents2.00
Widal Test..... 2.50
Tissue Sections.. 5.00
Tuberculin Test 5.00
Wassermann's Test 10.00

Milk.

Chemical 2.50
Bacterial 5:00
Water analysis, bacterial examination.. 5.00
Chemical examination including alkalinity, chlorides, ammonia, nitrites and nitrates ...5.00
Quantitative analysis ..... $10.00 to 25.00
Culture Media (per tube) ..... .25
Sterilized tubes and pipettes ..... .15
Coagulation time 2.50
Vaccines..... 10.00
Sterilized Tubes with swab .....50 Bacterial Cultures 1.00 Sterilized solution.. 5.00 Spinal Puncture and Analysis 5.00

Address all specimen to the Charlotte Sanatorium Laboratory, Charlotte, N. C

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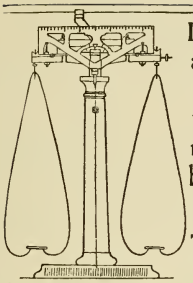

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